

# THE AMERICAN PSYCHOLOGIST

VOLUME 13

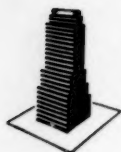


NUMBER 9

*September, 1958*

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# THE AMERICAN PSYCHOLOGIST

Journal of the American Psychological Association, Inc.

Volume 13

September, 1958

Number 9

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PROCEEDINGS OF THE THIRTY-EIGHTH ANNUAL MEETING  
OF THE  
WESTERN PSYCHOLOGICAL ASSOCIATION

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*Occidental College*

THE thirty-eighth Annual Meeting of the Western Psychological Association was held in Monterey, California, on April 24-26, 1958. Seven hundred and fifty-two persons registered for the convention. The program included 111 papers, 17 symposia, an invited address by Harry Harlow, the annual business meeting, and the annual banquet and presidential address. The California State Psychological Association also held its annual business meeting.

The Presidential Address by Leona Tyler was entitled "Toward a Workable Psychology of Individuality." Tyler proposed that the study of individuality be approached through the study of choice and organization of choice patterns, rather than through the traditional emphasis on traits.

The Program Committee was chaired by Francis Pal-

mer and included Mitchell Berkun, Donald Murphy, and Richard Snyder. The Local Arrangements Committee was chaired by Thomas Myers and included Hugh Bayless, Hilton Bialek, Patrick Capretta, Paul Hood, T. Owen Jacobs, Richard Kern, Judson Mills, Polly Parker, and Margaret Porter.

The 1959 meeting will be held in San Diego, California, April 16-18. Ivan McCollom is Program Chairman for 1959, and Oscar Kaplan is in charge of local arrangements. San Jose, California, was selected for the site of the 1960 meeting.

Donald Lindsley was elected President-elect for the coming year. Francis Palmer will be Secretary-Treasurer for 1959 and 1960. Quinn McNemar is President of the WPA for 1959.

PROGRAM

PAPER SESSIONS

Applied

TOR MEELAND, *HumRRO*, Chairman

Relationship between vocational interests and success on the job of USAF employees. MARIO LEVI, *McClellan Air Force Base*.

The predictive value of the American Council on Education psychological examination for college freshmen. NORMAN B. HENDERSON AND EVELYN MALUEG, *Los Angeles State College*.

Prediction of success in nursing training. IRWIN MAHLER, *Occidental College*.

Analysis of systematic biases in ratings. HARVEY F. DINGMAN, *Pacific State Hospital*.

The predictability of ratings as a function of interrater agreement. DONALD N. BUCKNER AND ROBERT R. MACKIE, *Human Factors Research, Inc.*

An analysis of job related attitudes. RICHARD K. EYMAN, *Pacific State Hospital*.

Clinical

RICHARD S. LAZARUS, *University of California*,  
Chairman

Psychological correlates of tallness in women. GRAHAM B. BELL AND CAROLE MCCOV, *Pomona College*.

The predictive ability of reactions to cartoons as an instrument to select effective clinicians. SEYMOUR L. ZELIN AND RODNEY SKAGER, *Patton State Hospital*.  
Machover Draw-A-Person item appearance: A function of emotional disturbance and/or level of intelligence. HARRY ARON, *Sacramento State College*.

Discrepancies among self-related concepts in relation to personal adjustment. NORMAN W. HICKMAN, *Lewis and Clark College*.

The front and back doors of a hospital for mental defectives. CHARLES D. WINDLE AND HARVEY F. DINGMAN, *Pacific State Hospital*.

Context as a source of information in rating depth of interpretation. ZANWIL SPERBER, *University of California at Los Angeles*.

Personality changes in a group psychotherapy program for clinical education of seminary students. LLOYD W. FELLOWS, JR. AND DAVID D. EITZEN, *Southern California School of Theology*.

Research participation initiates and screens self-referentials. KARL V. SCHULTZ, *Oakland Veterans Administration Hospital*.

Hypnosis

FREDERICK A. ZEHRER, *Letterman Army Hospital*,  
Chairman

Construction of a personality inventory scale for the prediction of hypnotic susceptibility: A preliminary

- report. PHILIP GOUGH AND ANDRE M. WEITZENHOFFER, *Stanford University*.
- Social characteristics of susceptible and unsusceptible hypnotic subjects. WARREN M. WILCOX AND VOLNEY FAW, *Portland State College and Lewis and Clark College*.
- Is there a Braid effect (hypnosis by visual fixation)? ANDRE M. WEITZENHOFFER, *Stanford University*.
- The systematic use of hypnosis in individual and group psychotherapy. JACK FOX, *Los Angeles*.

### Physiological I

JOHN H. TAYLOR, *Scripps Institution of Oceanography*, Chairman

- Effects of sustained muscular tension on electromyographic activity. ROBERT G. EASON, *US Navy Electronics Laboratory*.
- Facilitative and disruptive effects of strychnine sulphate on maze learning. JAMES L. MCGAUGH, *San Jose State College*.
- The effect of drug determined subordination in a monkey hierarchy. DONALD SLYE AND R. W. LEARY, *University of Oregon*.
- The selective effects of benzedrine, sparine, and deprivation in the learning of monkeys. ROBERT LEARY, *University of Oregon*.

### Group Processes

DAVID L. COLE, *Occidental College*, Chairman

- The group process in gang rape. WILLIAM H. BLANCHARD, *System Development Corporation*.
- Paso Robles pioneer treatment program. WILLIAM B. LEWIS, *Paso Robles School for Boys*.
- The use of the post-session in group psychotherapy. BARBARA N. OLGUIN, *Psychological Service Associates*.
- Process structuring and group therapeutic progress. ANNA B. BRIND AND NAH BRIND, *Central Psychiatric Medical Group*.

### Social I

BERTRAM RAVEN, *University of California at Los Angeles*, Chairman

- The relationship between expectation of religious discrimination, ethnic group identification, and vocational choice. ALFRED JACOBS, BERTRAM STERN, AND ISAAC BERMAN, *University of Southern California*.
- Value differences in a university subculture. THOMAS W. MILBURN, *US Naval Ordnance Test Station*.
- The changing self-percepts of foreign students. CHARLES G. MCCLINTOCK, *University of California at Santa Barbara*.

- Sociocultural differences in value-attitude consistency. WAYNE B. HOLDER, *Fresno State College*.
- Structure, tension, and interaction patterns in Mexican and American families. ARNOLD M. COOPER, *Fresno State College*.

### Human Learning I

WILLIAM W. GRINGS, *University of Southern California*, Chairman

- An experimental investigation of the relative adequacy of two theories of retroactive interference as they apply to paired-associates nonsense syllable learning. LUTHER B. JENNINGS, *Occidental College*.
- Preconditioning factors in compound stimulus conditioning. ALVIN MARKS AND WILLIAM W. GRINGS, *University of Southern California*.
- Effect of three types of predifferentiation on learning of stimulus and response members of nonsense syllable pairs. J. H. BAILEY AND W. E. JEFFREY, *University of California at Los Angeles*.
- The relation of rate and class of hypothesis formation to problem solving achievement. RAMON J. RHINE, *System Development Corporation*.

### Social II

CARL J. LANGE, *HumRRO*, Chairman

- Draw-A-Man results with Nepalese children. NORMAN D. SUNDBERG AND WESLEY TERWILLIGER, *University of Oregon*.
- Communication pattern and influence of the leader as determinants of group unity. HARRISON E. MADDEN, *Fresno State College*.
- Background and personality correlates of self concepts of communicative skill. ALLAN KATCHER, S. FRANK MIYAMOTO, AND LAURA CROWELL, *System Development Corporation and University of Washington*.
- Vocal cues to language identification. JOHN A. STARK-WEATHER AND ALAN COHEN, *University of California School of Medicine*.

### Human Learning II

RICHARD A. LITTMAN, *University of Oregon*, Chairman

- Magnitude of response to expected and unexpected stimuli. WILLIAM W. GRINGS AND HERBERT D. KIMMEL, *University of Southern California*.
- Continuity or noncontinuity. WILLIAM L. FAUST, *Pomona College*.
- Connotative meaning as a determinant of stimulus generalization. CHARLES F. DICKEN, *Stanford University*.

Reward and punishment in a minimal social situation.

JOSEPH B. SIDOWSKI, *San Diego State College*.

The influence of therapist behavior upon the self-reference verbalizations of the patient: Operant conditioning in a quasitherapy setting. J. MAURICE ROGERS, *Stanford University*.

### Human Engineering

CHARLES M. HARSH, *US Navy Electronics Laboratory*, Chairman

An experimental evaluation of four methods for handling time study data. MANUEL SMITH, FRED LEONARD, AND JOSEPH B. SIDOWSKI, *San Diego State College*.

The driving simulator. SLADE F. HULBERT, *Institute of Transportation and Traffic Engineering, University of California at Los Angeles*.

Visual transmission of complex aural information. HERBERT D. KIMMEL AND ROBERT R. MACKIE, *Human Factors Research, Inc.*

Variables influencing operator performance on rectangular grid display. LYLE E. HUFFORD AND JOSEPH B. SIDOWSKI, *US Navy Electronics Laboratory and San Diego State College*.

A factor analysis of the practical performance of machinery repairmen. WALLACE S. HIGH AND ROBERT R. MACKIE, *Human Factors Research, Inc.*

Effects of surface friction on manipulative skill with gloved hands. HILDE GROTH AND JOHN LYMAN, *University of California at Los Angeles*.

A performance assessment of the role of remaining sensory cues for arm amputees. JOHN LYMAN AND HILDE GROTH, *University of California at Los Angeles*.

### Perception

BRANT CLARK, *San Jose State College*, Chairman

The recovery of unrecognized material from tachistoscopically exposed pictures. JUDAH LANDES AND ERNEST R. HILGARD, *Stanford University*.

Incidental perception and incidental learning. FRANK B. W. HARPER AND SAMUEL R. PINNEAU, *Institute of Child Welfare*.

Influence of instructions of verbal report of visual sensations under conditions of reduced sensory input. DONALD B. MURPHY, THOMAS I. MYERS, AND EDWARD J. KANDEL, *HumRRO*.

Ordinal effects in perceptual judgment. ALLEN PARDUCCI, *University of California at Los Angeles*.

A search for physical correlates to psychological dimensions of sound. LAWRENCE N. SOLOMON, *US Navy Electronics Laboratory*.

### Animal Learning I

MICHAEL WARREN, *Stanford University*, Chairman

The effects of temperature and food deprivation on the random activity of *Macaca mulatta*. J. L. DeVITO AND O. A. SMITH, *University of Washington*.

Comparison of the effect of satiation at high and low training levels on exploratory behavior of fish and rats. JOHN V. HARALSON, *Los Angeles State College*. Tactile stimulation as reinforcement for cats and its relation to early feeding experience. BERNICE M. WENZEL, *University of California at Los Angeles*.

An experimental modification of food preference in chickens. PATRICK J. CAPRETTA AND PETE O. JOHNSON, *HumRRO and University of Colorado*.

An attempt to condition a thirst drive. HERBERT MOSKOWITZ, *University of Utah*.

Factors influencing behavior of monkeys offered choices between different amounts of food reward. WILLIAM A. WILSON, JR., *Institute of Living, Hartford, Connecticut*.

### Animal Learning II

GERALD E. MCCLEARN, *University of California*, Chairman

Performance of a "fear" response depends on the interval between extinction trials and ECS treatments. FRANCIS LEUKEL, *San Diego State College*.

The secondary reinforcement value of the Skinner-box click. EUGENE EISMAN, *University of California at Riverside*.

Avoidance learning of discrimination problems by the rhesus monkey. T. O. JACOBS, C. L. HAMILTON, AND R. A. PATTON, *HumRRO, University of Pittsburgh, and Montefiore Institute for Research*.

Conflict and curiosity in the rat. DELBERT THIESSEN AND JAMES L. MCGAUGH, *San Jose State College*.

### Personality I

ALBERT BANDURA, *Stanford University*, Chairman

Coping and avoiding behavior and response to fear arousing propaganda. MICHAEL J. GOLDSTEIN, *University of California at Los Angeles*.

The relation of success and failure recall preference to academic performance in college. JAMES L. GILMORE, *Los Angeles State College*.

Stylistic variations in the self-views and work attitudes of a sample of professional research scientists. HARRISON G. GOUGH, *University of California*.

A factorial study of trait ratings used in an assessment of professional research scientists. DONALD G. WOODWORTH, *University of California*.

The development of a technique for assessing esthetic predispositions and its application to a sample of professional research scientists. WALLACE B. HALL, *University of California*.

On the validity of the Taylor Scale of Manifest Anxiety. JOHN C. SCHOENHERR AND JACK FOX, *Camarillo State Hospital and Los Angeles*.

Are there different "kinds" of anxiety? ALLAN SCHLAFF, *Patton State Hospital*.

Intellectual and personality correlates of test anxiety. IRWIN G. SARASON, *University of Washington*.

### Developmental

HARRY A. SHOEMAKER, *State College of Washington*, Chairman

A study of the reliability of test items dealing with Piaget's concept of moral judgment. RONALD C. JOHNSON, *San Jose State College*.

The generalization of prestige among adolescent boys. EVAN R. KEISLAR, *University of California at Los Angeles*.

A developmental analysis of children's delay behavior in a temptation type of conflict situation. ELIZABETH A. BEALE, *Oregon State Hospital*.

A preliminary report on a longitudinal study of the relationship between parent's and child's mental test scores. DOROTHY H. EICHORN AND MARCIA BRANDY, *Institute of Child Welfare, University of California*.

The relationship between language and performance aspects of the "developmental ratings" of preschool children with cerebral palsy. IRLA LEE ZIMMERMAN AND MARGARET H. JONES, *University of California at Los Angeles*.

### Physiological II

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Day-to-day stability of automatic factor scores. B. A. WIELAND, T. D. CULLEN, B. T. ENGEL, AND M. A. WENGER, *University of California at Los Angeles*.

The conditioning of two autonomic response patterns in human subjects. T. D. CULLEN, *University of California at Los Angeles*.

ANS response patterns to intravenous infusions of levophed and epinephrine. T. L. CLEMENS, M. A. WENGER, F. M. ESTESS, M. L. DARSIE, R. R. SONNENSCHN, AND B. T. ENGEL, *University of California at Los Angeles*.

Studies of ANS function in practitioners of Hatha Yoga in India. M. A. WENGER AND B. K. BAGCHI, *University of California at Los Angeles*.

### Experimental

DANIEL BERLYNE, *University of California*, Chairman

A comparison of alternative significance tests. MITCHELL M. BERKUN, HELEN L. TAMBELLINI, AND LIESE RAPOZO, *HumRRO*.

On the application of the Box method of experimentation to psychological research: General principles and examples. J. ROBERT NEWMAN, *Hughes Aircraft Company*.

A test of the Burke and Estes theory of discrimination learning. R. C. ATKINSON, *University of California at Los Angeles*.

A test of two postulates of expectancy theory. JOHN P. SEWARD AND STANLEY SUMMERS, *University of California at Los Angeles*.

A procedure for increasing originality and its transfer effects. IRVING MALTZMAN, WILLIAM BOGARTZ, AND LOUIS BREGER, *University of California at Los Angeles*.

The counting of auditory stimuli. RICHARD A. MONTY, *HumRRO*.

The effects of verbal mediators on the formation of concepts. D. D. KLUPPEL AND W. E. JEFFERY, *University of California at Los Angeles*.

### Social III

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Modes of resolution of belief dilemmas. ROBERT P. ABELSON, *Center for Advanced Study in the Behavioral Sciences*.

Selectivity in exposure to information. JUDSON MILLS, ELLIOT ARONSON, AND HAL ROBINSON, *HumRRO, Stanford University, and San Francisco State College*.

Salience of norms and order of questionnaire items: Their effect on responses to the items. CHARLES Y. NAKAMURA, *University of California at Los Angeles*.

Paramorphic representation: I. Consistencies and problems in the judgment of intelligence and personality. PAUL J. HOFFMAN, WALTER NUNOKAWA, AND CHARLES N. UHL, *University of Oregon*.

Paramorphic representation: II. An investigation of contagion effect in judgment. CHARLES N. UHL, PAUL J. HOFFMAN, AND WALTER NUNOKAWA, *University of Oregon*.

Paramorphic representation: III. A study of the influence of personality factors in the judgment process. WALTER NUNOKAWA, PAUL J. HOFFMAN, AND CHARLES N. UHL, *University of Oregon*.

Indirect assessment of team performance in multi-man-machine systems. PAUL D. HOOD, *HumRRO*.



**Physiological III**

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Investigation in the role of the thalamus and hypothalamus in the control of food intake and motivation. ORVILLE A. SMITH, W. L. MCFARLAND, AND H. TEITELBAUM, *University of Washington*.

Age differences and other findings related to cortical conductivity. RICHARD P. BARTHOL AND BLANCHE SMITH, *University of California at Los Angeles*.

Behavior of single cells in cat sensorimotor cortex. A. L. TOWE AND H. D. PATTON, *University of Washington*.

Electromyographic reactions to strong auditory stimulation as a function of arousal level. A. K. BARTOSHUK, *University of California at Los Angeles*.

**Personality II**

ZANWIL SPERBER, *University of California at Los Angeles*, Chairman

A factor analysis of the Rorschach and WISC. E. J. LOTSOFF, A. COMREY, W. BOGARTZ, AND P. ARNSFIELD, *University of California at Los Angeles*.

An actuarial way of analyzing MMPI profiles. SEYMOUR LEVITAN, JACK H. GOLDFARB, AND ALFRED JACOBS, *University of Southern California*.

"Faking maladjusted" on the Edwards Personal Preference Schedule. GEORGE S. LEAVITT, *Fresno State College*.

An analysis of the responses of a male prison population to the Edwards Personal Preference Schedule. RAYMOND E. BERNBERG, *Los Angeles State College*.

Development of aptitudes and their relations to personality, interests, and social status in adolescence. ALEXANDER R. NURSE, *Counseling Center, University of California*.

**Psychometrics**

ARTHUR LUMSDAINE, *University of California*, Chairman

Base rates and chaotic sampling. ALBERT ROSEN, *Washington State College*.

A contextual analysis of the MMPI D scale. PAUL DEMPSEY, *University of California at Davis*.

Some Army normative data on the 50-item form of the Taylor Manifest Anxiety Scale. HUGH L. LAMONACA, *HumRRO*.

The reliability of a modified digit span test procedure. THOMAS I. MYERS, GERALD BURDAY, LYMAN FORBES, AND JACK ARBIT, *HumRRO*.

A test battery for diagnosis of central nervous system pathology. NICHOLAS NICHOLS, LEONARD BLANK, AND JACK BLUMENKRANTZ, *Alcohol Rehabilitation Unit*.

**SYMPOSIA****Recent Developments in the Education of Gifted Children**

HAROLD CARTER, *University of California*, Chairman

Participants: LEON LESSINGER, *State Department of Education*, JOHN CAFFREY, *Palo Alto Schools*, ROSA PARSONS, *San Diego Schools*, and J. C. GOWAN, *Los Angeles State College, Northridge*.

**Interpersonal Perception**

PAUL F. SECORD, *University of Nevada*, Chairman

Participants: CARL W. BACKMAN, *University of Nevada*, GEORGE S. LEAVITT, *Fresno State College*, and GEORGE R. BACH, *Institute of Group Psychotherapy*.

**Psychologists' Obligation and Opportunity for Upgrading General Counselors**

J. GUSTAV WHITE, *Los Angeles*, Chairman

Participants: DAVID D. EITZEN, *Southern California School of Theology*, and RICHARD H. KLEMER, *American Institute of Family Relations*.

**New Directions in Theoretical Psychology**

JOSEPH R. ROYCE, *University of Redlands*, Chairman

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**Creativity and Psychological Health**

FRANK BARRON, *Wesleyan University*, Chairman

Participants: BRUNO KLOPPER, *University of California at Los Angeles*, and JOHN PERRY, *University of California School of Medicine*.

**Stress: Physiological, Clinical, and Experimental Approaches**

RICHARD S. LAZARUS, *University of California*, Chairman

Participants: MITCHELL M. BERKUN, *HumRRO*, and NELLO PACE, *University of California*.

**Communication of Psychodiagnostic Findings**

F. HAROLD GIEDT, *Sepulveda VA Hospital*, Chairman

Participants: HARRY GRAYSON, *Brentwood VA Hospital*, SIDNEY CRAIG, *Huntington Park*, and NICHOLAS ROSE, *Wadsworth VA Hospital*.

**Group Analysis of Interpersonal Maneuvers**

GEORGE R. BACH, *Institute of Group Psychotherapy*, Chairman

Participants: WESLEY HILER, *Chapman College*, ERIC BERNE, *Carmel*, TIMOTHY LEARY, *Kaiser Foundation*, and DAVID D. EITZEN, *Southern California School of Theology*.

**Postdoctoral Training Needs and Programs in Psychology**

J. F. T. BUGENTAL, *Psychological Service Associates*, Chairman

Participants: D. B. KLEIN, *University of Southern California*, J. ARTHUR WAITES, *Los Angeles VA*, LAUNOR F. CARTER, *System Development Corporation*, and EDWARD M. GLASER, *Edward Glaser and Associates*.

**The Educational Requirements and Vocational Opportunities for Psychologists Tomorrow**

DUANE M. RUMBAUGH, *San Diego State College*, Chairman

Participants: DAVID KRECH, *University of California*, J. A. GENGARELLI, *University of California at Los Angeles*, ALLEN EDWARDS, *University of Washington*, and STEVEN JACOBS, *Occidental College*.

**Cultural Aspects of Clinical Problems**

GEORGENE SEWARD, *University of Southern California*, Chairman

Participants: ALAN J. GLASSER, *Reiss-Davis Clinic for Child Guidance*, GEORGE HOHMAN, *Long Beach VA Hospital*, EDWIN S. SHNEIDMAN, *Brentwood Neuropsychiatric VA Hospital*, and NORMAN FARBEROW, *VA Mental Hygiene Clinic*.

**Contemporary Problems in the Study of Animal Behavior**

GERALD E. MCCLEARN, *University of California*, Chairman

Participants: J. M. WARREN, *Stanford University*, P. R. MARLER, *University of California*, and M. R. ROSENZWEIG, *University of California*.

Discussants: H. F. HARLOW, *University of Wisconsin*, and D. KRECH, *University of California*.

**Recent Developments in Mathematical Models for Behavior Theory**

RICHARD C. ATKINSON, *University of California at Los Angeles*, Chairman

Participants: ROBERT P. ABELSON, *Yale University* and *Center for Advanced Study in the Behavioral Sciences*, PATRICK SUPPES, *Stanford University*, EDWARD CARTERETTE, *University of California at Los Angeles*, and ERNEST ADAMS, *University of California*.

**Drive Reduction and Reinforcement: Theory and Research**

PATRICK J. CAPRETTA, *HumRRO*, Chairman

Participants: MAURICE SMITH, *University of Colorado*, MONCRIEFF SMITH, *University of Washington*, DANIEL BERLYNE, *University of California*, and EUGENE EISMAN, *University of California at Riverside*.

**Current Research on Child Behavior and Development**

SIDNEY W. BIYOU, *University of Washington*, Chairman

Participants: DONALD M. BAER, *University of Washington*, WENDELL E. JEFFERY, *University of California at Los Angeles*, and HENRY D. SCHALOCK, *Oregon State College*.

**Community Needs for Psychological Service and Research**

ROBERT T. ROSS, *Sonoma State Hospital*, Chairman

Participants: JAMES O. PALMER, *University of California Medical Center, Los Angeles*, JOSEPH SHEEHAN, *University of California at Los Angeles*, and WILLIAM B. BEACH, *State Department of Mental Hygiene*.

**SPECIAL MEETINGS**

California State Psychological Association. Conference and business meeting.

Psi Chi. Business and social meeting.

Western Psychological Association. Business meeting. Annual Banquet and Presidential Address: Toward a Workable Psychology of Individuality. LEONA E. TYLER, *University of Oregon*.

Invited Address: And After Motherhood—What? HARRY F. HARLOW, *University of Wisconsin*.

# PROCEEDINGS OF THE THIRTIETH ANNUAL MEETING OF THE MIDWESTERN PSYCHOLOGICAL ASSOCIATION

DONALD W. FISKE, Secretary-Treasurer

*University of Chicago*

THE Midwestern Psychological Association held its thirtieth Annual Meeting at the Hotel Sheraton-Cadillac, Detroit, on May 1-3, 1958, with 1,179 persons registered. The program consisted of 112 papers, 10 symposia, and 3 seminars.

The Presidential Address, "Conditioning to Complex Stimuli," was delivered by Delos D. Wickens of Ohio State University.

The Program Committee consisted of Melvin H. Marx, Chairman, Alexander Buchwald, Ross Stagner, and Donald W. Fiske. The Local Arrangements Committee included E. T. Raney, Chairman, C. G. Browne, James Dent, Michael Reece, Edward B. Greene, Justine Pikunas, and Bertram Cohen. The Alpha Kappa Psi Fraternity and the Phi Gamma Nu Sorority assisted the local committee. Roderick Bare and Michael Amrine of the APA Central Office assisted with placement and public information respectively. Arthur W. Melton was elected President, I. E. Farber was elected Secretary-Treasurer, and Melvin H. Marx and Carl P. Duncan were elected to the Council. The continuing member of the Council is C. J. Burke.

The following persons were elected to life membership: Amos C. Anderson, Samuel J. Beck, Hermann F. Buegel, Heinrich Kluver, Chester O. Mathews, and Emily L. Stodgill. The business meeting accepted 313 new members, bringing the total membership to 2,185.

According to the standing practice of the association, any APA member may automatically become a member of MPA by submitting his dues payment (\$1.25 for one year; \$3.00 for three years) to the Secretary-Treasurer. Persons joining under this provision prior to the 1959 program deadline may submit papers.

The following 256 APA members became MPA members during the year ending April 1:

Preston S. Abbot  
Morris Aderman  
Diane R. Albitz  
Sheldon Alexander  
Robert R. Alvarez  
Burton G. Andreas  
Douglas Anger  
Stanley Augenstein  
Nathan H. Azrin  
Richard S. Ball  
Roderick H. Bare  
Stanley M. Barry, Jr.  
Thomas Bassett  
Jarvis Bastian

Robert Beare  
Samuel J. Benveniste  
Leslie Berger  
Robert K. Berntson  
Aurora L. Biamonte  
Duanè F. Blackwood  
Wesley C. Blair  
Sid Blatt  
Paul Blommers  
Albert I. Blumberg  
R. Darrell Bock  
Betty J. Bosdell  
Everett W. Bovard  
John R. Braun

Leonard Braunstein  
Frederick D. Breslini  
J. D. Brower  
Louis Brown  
William F. Brown  
Burtram B. Butler  
Robert Callahan  
Gordon N. Cantor  
Louis P. Carini  
Earl R. Carlson  
Nils James Carlson  
Albert B. Chalupsky  
Gloria Cheek  
Charles N. Cherry  
Robert C. Congelton  
Don J. Cosgrove  
Ray A. Craddick  
Merritt Cushing  
Zile S. Dabas  
Chester W. Darrow  
Joseph G. Dawson  
Nancy DeHaan  
Richard Delp  
James K. Dent  
Albert J. Dinnerstein  
Paul Dolinko  
Walter S. Domash, Jr.  
Sheldon K. Edelman  
Janet F. Eells  
Kenneth W. Eells  
Douglas S. Ellis  
Henry C. Ellis  
Herman P. Epstein  
Claire B. Ernhart  
Herman Feldman  
Nadine Ferguson  
Walter J. Fightmaster  
Cameron Fincher  
Joseph C. Finney  
Arnold Freedman  
Leo Ganz  
Arnold A. Gerall  
Edwin Ghiselli  
Robert L. Gibson  
Arthur C. F. Gilbert  
William M. Gilbert  
Harold Gilbertstadt  
James R. Glennon  
Walter C. Gogel  
Bernard Gold  
Morton Goldman  
Mymon Goldstein  
Jesse Gordon  
Charles H. Griffin  
Byron L. Groesbeck  
Norman E. Gronlund  
Bernard Guernsey

John W. Gyr  
Irving A. Haber  
Ray C. Hackman  
John M. Hadley  
Robert W. Halliday  
Joseph C. Hammock  
Joseph H. Handlon  
Charles Hanley  
Theodore Hariton  
George S. Harker  
Harold Harris  
Roger L. Harrison  
Bryce O. Hartman  
Roy Hastman  
John R. Hawkinson  
Alfred B. Hilbrun, Jr.  
Gordon T. Heistad  
E. R. Henry  
Simon Herman  
Marvin Hersko  
Eckhard H. Hess  
Winfred F. Hill  
James D. Hitt, Jr.  
Richard W. Hodgson  
J. Pierre Hogue  
John L. Holland  
Arthur E. Hoover  
William C. Howell  
Herbert H. Humphreys  
Anthony R. Hybl  
Philip W. Jackson  
William E. Jaynes  
Gilbert R. Johns  
Derwood E. Johnson  
Austin E. Jones  
Dan H. Jones  
Thomas E. Jordan  
Henry K. Kaplan  
Jeanne Kapoun  
Dorothy F. Kaufman  
Melvin J. Kelley  
Diana W. Kerner  
Frederick A. King  
Leslie Knudsen  
Maurice Korman  
Conrad L. Kraft  
Anthony M. Kuchan, Jr.  
William Kulick  
Ronald B. Kurz  
Delmar L. Landen, Jr.  
John Langdon  
Herbert Lange  
George Lassen  
Walter W. Leach  
Constance Leitch  
Russell G. Leiter  
Dorothy M. Lemmon

C. Martin Levett, Jr.  
 Marvin Levine  
 George Levinger  
 Edwin C. Lewis  
 Robert I. Long  
 John S. Loper  
 Burdette W. Lundy  
 David T. Lykken  
 Colin G. McDiarmid  
 Howard McFann  
 Brendan A. Maher  
 Winton H. Manning  
 Frederick K. Maxwell  
 James S. Mayer  
 Dominick Mazzitelli  
 Frank Metzger  
 Herbert H. Meyer  
 Archer L. Michael  
 John A. Monkman  
 Josephine Morse  
 Harold R. Musiker  
 Rolf Muuss  
 Marvin S. Myers  
 Basil E. Najjar  
 Charles W. Nelson  
 Constance B. Nelson  
 Carson Y. Nolan  
 Kathryn Norcross  
 John E. Nygaard  
 Irene M. Olson  
 George N. Ornstein  
 H. G. Osborn  
 May H. Palacios  
 Francis Palmer  
 Harry J. Parker  
 Oscar A. Parsons  
 William B. Pavlik  
 Lelon J. Peacock  
 John S. Pearson  
 Frances C. Perce  
 Donald M. Pollie  
 Ernest S. Primoff  
 Dean G. Pruitt  
 Herbert C. Quay  
 Oakley S. Ray

Rex Rector  
 Jeannett P. Reilly  
 Stanley L. Reevesman  
 Ronald Ribler  
 Launcey L. Roder  
 Mary D. Rootes  
 Leonard G. Rorer  
 Robert Rosenthal  
 Richard Rosman  
 Perry J. Rushlau, Jr.  
 Salvatore Russo  
 Mary N. Rynerson  
 Franz Samelson  
 Kenneth O. Sanborn  
 K. Warner Schaie  
 Ivan H. Scheier  
 Richard H. Schmidt  
 Chandler G. Screven  
 Richard Seaton  
 Sidney Seidenstein  
 Jack Shaffer  
 William G. Shipmen  
 Margaret Shuttleworth  
 Morton Slobin  
 Philip A. Smith  
 Stanley Stark  
 Leonard Staugas  
 Larry Stein  
 Edward Steininger  
 Spencer B. Sterne  
 Samuel N. Stevens  
 Eugene R. Streich  
 Leo Subotnik  
 Elmer Sundby  
 B. Sutton-Smith  
 Arthur S. Tamkin  
 John E. Taylor  
 Robert F. Testin  
 Richard W. Thomas  
 H. Edwin Titus  
 Donald A. Topmiller  
 Rolland R. Tougas  
 D. W. Tyler  
 W. L. Van Buskirk  
 Charles J. Vaughan

Francis F. Vernallis  
 Robert Vineberg  
 Robert A. Wagoner  
 H. J. Wahler  
 William C. Watson  
 Eugene J. Webb  
 Erwin S. Weiss  
 Robert S. Weiss  
 Morris Weitman  
 W. I. Welker  
 John A. Wellington  
 Paul H. Whiteman  
 Kellogg V. Wilson

Casimer S. Winiewicz  
 Julian Wohl  
 Robert J. Wolf  
 Paul J. Woods  
 Donald P. Woodward  
 Leonard Worell  
 Herbert P. Wright  
 J. Wilson Young  
 Marguerite L. Young  
 Harry C. Yudin  
 Joseph Zinnes  
 Edwin S. Zolik

The following applicants were elected to membership:

Louise Allen  
 Karl Beck  
 Angela C. Belfatto  
 Robert Bell  
 Warren Blumenfeld  
 Robert K. Branson  
 Donald R. Brown  
 Ronald L. Brown  
 Bradford Bunnell  
 Richard Carr  
 Andrew P. Chenzoff  
 Chungsoo J. Cho  
 Albert Crambert  
 Ladd Duryea  
 Eugene Ebner  
 Solomon Feldman  
 Gloria J. Fischer  
 Herbert P. Froehlich  
 Abraham Goldman  
 Peter Harold Greene  
 Jay Hansche  
 Douglas Harris  
 Douglas S. Holmes  
 John J. Hopkins  
 Richard Hornick  
 Carleton Johnson  
 Neal Johnson  
 Shirley C. Karas  
 Andrew James Karoly  
 Hyman Kempler

Herbert D. Landahl  
 Kenneth Laughery  
 Thomas Leidy  
 Richard Lindley  
 Raleigh Lyles  
 Robert T. McCay  
 Peter McCormack  
 Richard R. McCracken  
 Calvin McFarling  
 Eugene C. Mayfield  
 Robert M. Morgan  
 Wilton W. Murphy  
 James Naylor  
 Martha Nelson  
 William C. Osborn  
 John E. Overall  
 George J. Palmer, Jr.  
 Donald Parks  
 David Premack  
 James Robbins  
 Ned Rosen  
 Maurice Siskel, Jr.  
 Douglas Snyder  
 Daniel J. Stern  
 Joel Stubbs  
 Myrthalyne Thompson  
 Norman L. Vincent  
 James Woo-Sam  
 Lawrence S. Wrightsman

## PROGRAM

### PAPER SESSIONS

Abstracts of papers have been deposited with the ADI Auxiliary Publications Project, Photoduplication Service; Library of Congress; Washington 25, D. C., as Documents No. 5604-5621. When ordering, remit the indicated price, using check or money order payable to: Chief, Photoduplication Service, Library of Congress. Advance payment is required.

TITLE	ADI NO.	MICRO- FILM	PHOTO- STAT
Anxiety	5604	\$1.25	\$1.25
Social Psychology	5605	1.75	2.50
Human Conditioning and Learning	5606	1.75	2.50
Measurement Instruments	5607	1.75	2.50

Animal Discrimination and Learning	5608	1.75	2.50
Probability Learning	5609	2.00	3.75
Detection of Brain Damage	5610	1.75	2.50
Personality, Motivation, and Learning	5611	1.75	2.50
Perception	5613	2.00	3.75
Comparative Psychology	5614	1.75	2.50
Animal Motivation and Learning I	5612	1.75	2.50
Clinical Psychology I	5615	1.75	2.50
Child Development	5616	1.25	1.25
Animal Motivation and Learning II	5617	1.25	1.25
Engineering Psychology	5618	1.75	2.50
Physiological Psychology	5619	1.75	2.50
Clinical Psychology II	5620	1.75	2.50
Vision	5621	\$2.00	\$3.75



### Anxiety

- FRANKLIN J. SHAW, *Purdue University*, Chairman
- BRADFORD N. BUNNELL, *Carnegie Institute of Technology*. Some physiological correlates of manifest anxiety.
- DONALD G. DOEHRING, *Central Institute for the Deaf*. The relation of manifest anxiety to the amount of muscular tension induced by verbal stimuli.
- EUGENE E. LEVITT, *Indiana University Medical Center*. A clinical field study of the validity of the Taylor Anxiety Scale.
- SHIRLEY PADE MACINTOSH AND BRENDAN A. MAHER, *Northwestern University*. Relationship of verbal fluency to sentence completion scores in anxious and nonanxious subjects.

### Social Psychology

- BEN WILLERMAN, *University of Minnesota*, Chairman
- MILTON E. ROSENBAUM AND DOUGLAS E. FRANC, *State University of Iowa*. Opinion change as a function of external commitment and amount of change advocated.
- EDWIN B. HUTCHINS AND FRED E. FIEDLER, *University of Illinois*. Task oriented and quasitherapeutic role functions of the small group leader.
- SEYMOUR ROSENBERG, *AFPTRC, Lackland Air Force Base*. The maintenance of a learned response in controlled interpersonal conditions.
- VERA T. KANAREFF AND JOHN T. LANZETTA, *University of Delaware*. The acquisition of imitative and opposition responses under two conditions of instruction induced "set."

### Human Conditioning and Learning

- E. JAMES ARCHER, *University of Wisconsin*, Chairman
- GREGORY A. KIMBLE AND ROBERT A. DUFORT, *Duke University and Yale University*. Effects of ready signals and interpolated UCS trials on eyelid conditioning.
- JAY HANSCH, *University of Wisconsin*. The conditioned stimulus and the interstimulus interval in eyelid conditioning.
- DAVID A. GRANT, HAROLD G. HUNTER, AND AMBALAL S. PATEL, *University of Wisconsin, United States Army, and University of Baroda (India)*. Spontaneous recovery of the conditioned eyelid response.
- RICHARD N. BERRY, *Indiana University*. The transfer effects of verbal reinforcement to a following unrelated task.
- RANDALL M. CHAMBERS, *Rutgers University*. Transfer of training among components within a complex psychomotor task.

- JAMES F. VOSS, *Wisconsin State College (Eau Claire)*. Acquisition of verbal associations as a function of stimulus-response probability.
- TERESA CARTERETTE AND IRVING J. SALTZMAN, *Indiana University*. A comparison of incidental and intentional learning of isolated and crowded items.

### Measurement Instruments

- H. H. REMMERS, *Purdue University*, Chairman
- ERNEST C. TUPES AND RAYMOND E. CHRISTAL, *Wright Air Development Center, Lackland Air Force Base*. Stability of personality trait rating factors obtained under diverse conditions.
- ROBERT L. MCCORNACK, *Sandia Corporation*. An evaluation of two methods of cross-validation.
- DON J. COSGROVE, *Procter & Gamble*. Diagnostic rating of teacher performance.
- PAUL J. PATINKA, *Purdue University*. An empirical comparison of two methods of test selection and weighting.

### Animal Discrimination and Learning

- D. W. TYLER, *University of Missouri*, Chairman
- BILLEY LEVINSON, *University of Wisconsin*. Oddity learning set and its relation to discrimination learning set.
- ARTHUR J. RIOPELLE AND JAMES M. CRONHOLM, *US Army Medical Research Laboratory and Emory University*. Conditional problem discrimination.
- HAROLD BABB, *Coe College*. Change in relative cue value of components of a stimulus complex under constant reinforcement conditions.
- JOHN KOEHLER, JR., *Indianapolis Center, Indiana University*. Intertrial and reinforcement effects in successive discrimination.
- CHARLES C. PERKINS, JR., *Kent State University*. Stimulus generalization following discriminations of different difficulty.
- ARNOLD A. McDOWELL AND W. LYNN BROWN, *University of Texas*. Transfer by normal and chronic whole-body irradiated monkeys of a single learned discrimination along a peripheral cue gradient.
- RICHARD M. CARR, W. LYNN BROWN, AND JOHN E. OVERALL, *University of Texas*. The effect of whole-body radiation upon association of peripheral cues.
- ROGER T. DAVIS, *University of South Dakota*. The performance of X-ray irradiated and nonirradiated monkeys on discrimination problems made ambiguous by stimulus dilution.

### Probability Learning

- C. J. BURKE, *Indiana University*, Chairman
- PAUL BAKAN, *Michigan State University*. Individual consistency in the generation of a "random" binary series.

- DEAN G. PRUITT, *University of Michigan*. Individual differences in sequential decision making.
- LOWELL M. SCHIPPER AND DONALD L. PARKS, *Kansas State College*. Decision making in a gaming situation as a function of the population size of possible outcomes.
- R. ALLEN GARDNER, *Quartermaster Research and Development Center*. Multiple-choice decision behavior.
- EDITH NEIMARK AND JOHN A. ROLLER, *AFPTRC, Lackland Air Force Base*. Differential reinforcement of information getting in problem solving.
- PAUL J. WOODS, *Hollins College*. The relationship between probability difference ( $\pi_1 - \pi_2$ ) and Estes' rate constant [ $\Theta(2 - \pi_1 - \pi_2)$ ] in a contingent partial reinforcement situation.
- GILBERT R. JOHNS, *Ohio University*. The effect of secondary reinforcement schedules on prediction behavior in a two-choice situation.
- DAVID L. LABERGE, *Indiana University*. The effect of preliminary trials upon rate of conditioning: A test of the neutral elements assumption in statistical learning theory.
- JOHN E. OVERALL AND W. LYNN BROWN, *University of Texas*. An analysis of the decision behavior of rats and man.

#### Detection of Brain Damage

- WARD HALSTEAD, *University of Chicago*, Chairman
- DORIS VAN PELT, R. DARRELL BOCK, LYLE V. JONES, AND JOSEPH M. WEPMAN, *University of Chicago and University of North Carolina*. Differential disruption of the symbolic processes in aphasic language disorders.
- EUGENE B. NADLER, STEPHEN L. FINK, FRANKLIN C. SHONTZ, AND ROBERT W. BRINK, *Highland View Hospital*. Objective scoring versus clinical judgment of the Bender-Gestalt.
- GEORGE ASHMAN, JOHN MICHAEL, MARIANNE SCHMIDT, AND ALFRED KRISTOFFERSON, *Longview State Hospital and University of Cincinnati*. The reporting of the spiral aftereffect as a function of the degree of structure of the experimental conditions.
- OSCAR A. PARSONS, *Duke University*. Impairment of flicker discrimination in the visual fields of the brain damaged.
- HALLGRIM KLØVE, *Indiana University Medical Center*. The relationship of differential electroencephalographic patterns to the distribution of Wechsler-Bellevue scores.

#### Personality, Motivation, and Learning

- I. E. FARBER, *State University of Iowa*, Chairman
- RONALD B. KURZ, *Indiana University*. The influence of electric shock on complex learning and performance in human subjects.

- DAVID BIRCH, *University of Michigan*. Effect of differential motivation shift on a complex learning task.
- NORMA F. BESCH, *Columbus Psychiatric Institute and Hospital*. Paired-associates learning as a function of anxiety level and shock.
- R. ERNEST CLARK, *State University of Iowa*. Word recognition as a function of foreknowledge and word class.
- CHARLES W. ERIKSEN, HIROSHI AZUMA, AND ROSALIE B. HICKS, *University of Illinois*. Some evidence of the capacity for verbal discrimination of pleasant and unpleasant words prior to specific identification.
- ERWIN S. WEISS, *Western Reserve University*. Rigidity as a variable in transposition.
- IRWIN J. KNOPF AND ROBERT E. FAGER, *State University of Iowa*. Differences in gradients of stimulus generalization as a function of psychiatric disorders.
- ERNEST J. DOLEYS, *University of Texas*. The effect of failure on verbal learning as a function of self-acceptance.

#### Perception

- WILLIAM E. KAPPAUF, *University of Illinois*, Chairman
- KELLOGG V. WILSON, *Duke University*. A multidimensional scaling analysis of confusions of stop consonants.
- SOLOMON E. FELDMAN AND ARNOLD M. BINDER, *Indiana University*. Responses to reversible figures as a function of learning experience.
- ISRAEL GOLDIAMOND AND LESLIE F. MALPASS, *Southern Illinois University*. On afterimages to hypnotically induced color.
- HARVEY NASH, *Northwestern University Medical School*. The judgment of vertical proportions.
- CARL E. SHERRICK, *Washington University*. The effect of rate and duration of intensity increments on the auditory intensive difference limen.
- WILLARD R. THURLOW AND IRVING RAWLINGS, *University of Wisconsin*. Discrimination of number of simultaneous sounding tones.
- STANLEY BARRY AND JAN H. BRUELL, *Western Reserve University and Highland View Hospital*. Effect of a moving visual field on the perception of the median plane.
- RICHARD G. PEARSON AND GEORGE T. HAUTY, *Carnegie Institute of Technology and USAF School of Aviation Medicine*. Adaptive processes in perception of postural verticality.

#### Comparative Psychology

- MERRILL NOBLE, *Kansas State College*, Chairman
- JOAN MARIE HAVLENA AND SHELDON J. LACHMAN, *Wayne State University*. Photopic reactions, reactive inhibition, and spiral behavior in the paramecium.

STANLEY C. RATNER AND KLIEM R. MILLER, *Michigan State University*. Classical conditioning in earthworms, *Lumbricus terrestris*.

RICHARD R. ROSMAN AND ERNEST A. HAGGARD, *University of Illinois College of Medicine*. Some effects of early spatial environment on locomotion patterns in adult rats.

JOHN I. JOHNSON, JR., *Marquette University*. Double alternation by raccoons.

KENNETH M. MICHELS AND DONALD R. BROWN, *Purdue University*. Delayed response learning in the raccoon.

W. I. WELKER AND SIDNEY SEIDENSTEIN, *University of Wisconsin*. Representation of somatic afferents on the cerebral cortex of the raccoon.

ROBERT R. ZIMMERMAN AND HARRY F. HARLOW, *University of Wisconsin*. Form vs. intensity discrimination in the neonatal rhesus monkey.

WILLIAM A. MASON, *University of Wisconsin*. Social preference in monkeys and its relation to previous social experience.

#### Animal Motivation and Learning I

ROBERT A. PATTON, *University of Pittsburgh*, Chairman

GEORGE COLLIER, *University of Missouri*. A note on the Crespi-Zeaman effects.

DAVID PREMACK, *University of Missouri*. The deprivation-performance function for light-contingent bar pressing as determined by the number of consecutive tests per deprivation interval.

FRANK J. OCHOCKI AND DAVID PREMACK, *University of Missouri*. The joint effect of stimulus deprivation and the intertest interval on the frequency of light-contingent bar pressing.

LARRY STEIN, *VA Research Laboratories in Neuropsychiatry*. Secondary reinforcement established with subcortical stimulation as primary reinforcement.

WILLIAM F. REYNOLDS AND WILLIAM B. PAVLIK, *Western Michigan University*. Response strength as a joint function of magnitude of reward and time of deprivation.

DAVID R. THOMAS, RICHARD A. KING, AND NORMAN GUTTMAN, *Duke University*. Stimulus generalization as a function of level of motivation.

REED LAWSON AND DAVID R. DAWSON, *Ohio State University and University of Missouri*. Seward's "Test of Guthrie's Theory" refined.

#### Clinical Psychology I

IVAN N. MENSCH, *Washington University School of Medicine*, Chairman

H. J. WAHLER, *VA Hospital, Knoxville, Iowa*. Social desirability and self-ratings of intakes, patients in treatment, and controls.

RAY A. CRADDICK, *Washington University*. MMPI scores of a psychopathic and nonpsychopathic prison group.

ARTHUR S. TAMKIN, *Columbus Receiving Hospital for Children*. Rorschach card rejection by psychiatric patients.

GEORGE CERBUS AND ROBERT C. NICHOLS, *Purdue University*. Masculinity-femininity as measured by figure preferences.

FREDERICK H. KANFER, *Purdue University*. The relationship between verbal rate and content in interviews.

#### Child Development

SHELDON H. WHITE, *University of Chicago*, Chairman

HAROLD H. ANDERSON, GLADYS L. ANDERSON, IRWIN H. COHEN, AND FRANCES D. NUTT, *Michigan State University*. Image of the teacher by adolescent children in four countries: Germany, England, Mexico, and United States.

DAVID B. LYNN AND ROSALIE LYNN, *University of Colorado Medical Center and Denver General Hospital*. Age and sex differences in structured doll play fantasy.

JUANITA COLLIER AND ERNEST A. HAGGARD, *Wayne State University and University of Illinois College of Medicine*. The problem solving processes and motivational patterns of thirty preadolescents.

#### Animal Motivation and Learning II

WILLIAM J. ARNOLD, *University of Nebraska*, Chairman

ELIZABETH C. RICHARDSON, F. J. MCGUIGAN, AND ALLEN D. CALVIN, *Hollins College*. A test of drive conditioning as a factor in latent learning.

ANNE JAMES PREMACK AND DAVID PREMACK, *University of Missouri*. Increments in ad libitum eating as a function of deprivation for wheel turning behavior.

GIRARD W. LEVY, *Georgia State College of Business Administration*. The relationship between sexual-aggressive motivation and gregarious behavior.

SEYMOUR LEVINE AND SARA R. STAATS, *Columbus Psychiatric Institute and Hospital*. Emotionality and consummatory behavior.

MICHAEL F. HALASZ AND HOWARD F. HUNT, *University of Chicago*. Some effects of overtraining on the strength of conditioned fear and its control by the conditioned stimulus.

NILS JAMES CARLSON, *Western Reserve University*. Primary and secondary reward in traumatic avoidance learning.

## Engineering Psychology

- ERNEST J. MCCORMICK, *Purdue University*, Chairman
- JOE KAMENTZKY, *Quartermaster Food and Container Institute*. Contrast and convergence effects in the affective evaluation of foods.
- ROBERT W. BRAINARD AND GEORGE E. BRIGGS, JR., *Ohio State University*. Human information handling characteristics under self-paced serial and discrete conditions.
- IRVING B. GOODMAN AND JERRY S. KIDD, *Westinghouse Electric Corporation and Ohio State University*. The effect of visual cues in the surround on the accuracy of making absolute judgments of lineal inclinations.
- EDWIN H. ELKIN AND CONRAD L. KRAFT, *Ohio State University*. The effects of three instrument scale design variables on the efficiency of scale reading.
- NATHAN H. AZRIN, *Anna State Hospital*. The effect of high intensity noise on vigilance behavior.
- HARRY J. JERISON, *Antioch College*. The performance decrement in short and long vigils.
- LAWRENCE K. WATERS AND PAUL M. FITTS, *Ohio State University*. Effects of quantized error information on tracking performance in a closed loop system.

## Physiological Psychology

- DONALD W. LAUER, *Indiana University*, Chairman
- K. E. MOYER, *Carnegie Institute of Technology*. Effect of exogenous adrenalin on a startle response in the hooded rat.
- WILLIAM P. PARE AND H. W. KARN, *Carnegie Institute of Technology*. The effect of chronic conflict on gastric ulcer etiology.
- B. PAUL H. POSHEL, *Wayne State University*. An effect on conditioned fear apparently produced by vital staining of the blood-brain barrier.
- ROBERT Y. MOORE, JOHN A. HARVEY, AND IRVING T. DIAMOND, *University of Chicago*. Further effects of hippocampal ablation on conditioned avoidance.
- R. C. DAVIS, *Indiana University*. "Hunger contractions," "hunger pangs," and the stomach balloon.
- LORAZE GARAFALO, *Indiana University*. Gastric activity as affected by time-since-eating, rest, and visual stimulation.
- LEONARD E. JARRARD, *Carnegie Institute of Technology*. Muscular activity during acquisition of a motor task.

## Clinical Psychology II

- FRED MCKINNEY, *University of Missouri*, Chairman
- ROBERT L. MCFARLAND AND OLIVER J. B. KERNER, AND MORTON A. LIEBERMAN, *VA Research Hospital and University of Chicago*. The ward milieu: A factorial study of common attitudinal values.

- PHILIP A. SMITH, *Ann Arbor Hospital*. Factor analytic studies of the self concept.
- C. SCOTT MOSS, WILLIAM MORROW, HAROLD G. FREUND, AND RUTH JENSEN, *State Hospital No. 1, Fulton and VA Hospital, Jefferson Barracks*. Early psychological test changes produced by chlorpromazine in chronic schizophrenia.
- WILSON H. GUERTIN, *VA Hospital, Knoxville, Iowa*. A transposed analysis of paranoid schizophrenics.
- LOUIS P. CARINI AND PATRICIA F. CARINI, *Rockland State Hospital*. Visual perception of verticality in schizophrenic boys.

## Vision

- PHILBURN RATOOSH, *Ohio State University*, Chairman
- GEFALD ROSENBAUM, SHIRLEY I. DOBIE, AND BERTRAM D. COHEN, *Lafayette Clinic and Wayne State University*. Visual recognition thresholds following sensory deprivation.
- DONALD R. MEYER, SEISON SUKEMUNE, AND ROGER A. MYERS, *Ohio State University*. Local variations in the magnitude of a figural aftereffect.
- DONALD B. LINDSLEY AND WILLIAM H. EMMONS, *University of California, Los Angeles*. Perceptual blanking: A measure of perception time.
- GEORGE S. HARKER, *US Army Medical Research Laboratory*. Fixation disparity and the stereo-equidistance judgment.
- WALTER C. GOGEL, *US Army Medical Research Laboratory*. Convergence as a cue to absolute distance.
- PETER H. GREENE, *University of Chicago*. Interpretation of visual contour perception and acuity.
- PETER J. CHINETTI, JR., *Aero Medical Laboratory, Wright-Patterson Air Force Base*. The effect of reduced exposure duration on simultaneous brightness contrast.

## SYMPOSIUM

## The Use and the Misuse of the Rorschach Method in Research and Clinical Practice

- WILLIAM E. HENRY, *University of Chicago*, Chairman
- Variations in Rorschach procedure and methods of handling Rorschach data. MARGUERITE R. HERTZ, *Western Reserve University*.
- Varieties of Rorschach interpretation. ALBERT I. RABIN, *Michigan State University*.
- Varieties of Rorschach research. LEON H. LEVY, *Indiana University*.
- Discussants: RALPH M. REITAN, *Indiana University Medical Center*, MAX HUTT, *University of Michigan*, AND IRA FRIEDMAN, *Cleveland Psychiatric Institute and Hospital*.



### Experimental Extinction and the Nature of Reinforcement

WILLIAM K. ESTES, *Indiana University*, Chairman

As seen from a motivational theory of extinction. MELVIN H. MARX, *University of Missouri*.

As seen from elicitation theory. M. RAY DENNY, *Michigan State University*.

As seen from a neurophysiological theory of reinforcement. EDWARD L. WALKER, *University of Michigan*.

The reinforcing effects of extinction. JOHN W. COTTON, *Northwestern University*.

Discussant: WILLIAM K. ESTES, *Indiana University*.

### Supervisors' Concepts of Climate and Performance in Industry

EDWARD B. GREENE, *Chrysler Corporation*, Chairman

Semantics: Definitions and variables. JAMES F. WEIDIG, *Chrysler Corporation*.

Relation of ability of superintendents to communication as rated by foremen. EDWARD B. GREENE, *Chrysler Corporation*.

Supervisory concepts and standards regarding absenteeism: Results of conferences. DONALD F. WORPELL, *Chrysler Corporation*.

Needed studies of climate, morale, and their correlates. EDWIN F. HARRIS, *Chrysler Corporation*.

### The Implications of Information Theory for Counseling and Clinical Psychology

BERNARD SAPER, *Northwestern University*, Chairman

Information concepts in personality research. AUSTIN JONES, *University of Pittsburgh*.

Information concepts in personality measurement. DONALD W. FISKE, *University of Chicago*.

The implications of information theory for counseling and clinical psychology. WILLIAM HAYS AND FREDERICK WYATT, *University of Michigan*.

Discussant: ROBERT GLASER, *University of Pittsburgh*.

### Contemporary Accounts of Reinforcement

GREGORY KIMBLE, *Duke University*, Chairman

Reinforcement and the hedonic organization of behavior. P. T. YOUNG, *University of Illinois*.

General reformulation of reinforcement. DAVID PREMACK, *University of Missouri*.

Interaction of factors governing amount of reinforcement function. GEORGE COLLIER, *University of Missouri*.

The differential effect of auditory and visual reinforcement on the responsiveness of monkeys. ROBERT BUTLER, *University of Chicago*.

Discussants: HARRY HARLOW, *University of Wisconsin*, AND ROBERT GRICE, *University of Illinois*.

### Response Sets in Objective Tests

EUGENE E. LEVITT, *Indiana University Medical Center*, Chairman

The set to falsify, the failure of forced choice, and some alternatives. BERNARD M. BASS, *Louisiana State University*.

Components of variance due to acquiescence and content in the F Scale measurement of authoritarianism. LOREN J. CHAPMAN AND R. DARELL BOCK, *University of Chicago*.

Acquiescence and factorial interpretation of MMPI. DOUGLAS N. JACKSON AND SAMUEL MESSICK, *Pennsylvania State University*.

Acquiescence and extremes sets and their role in tests of authoritarianism and parental attitudes. MARVIN ZUCKERMAN AND JAMES NORTON, *Indiana University Medical Center*.

Response set vs. item content in schizophrenia. EUGENE H. BARNES, *Rohrer, Hibler & Replogle*.

Discussant: N. L. GAGE, *University of Illinois*.

### Some Recent Contributions of Experimental Psychology to Psychopathology

LESLIE F. MALPASS, *Southern Illinois University*, Chairman

Contributions from physiological psychology. RALPH REITAN, *Indiana University Medical School*.

Contributions from operant conditioning research. NATHAN AZRIN, *Anna State Hospital*.

Contributions from psychophysics. ISRAEL GOLDBLOND, *Southern Illinois University*.

Discussant: HOWARD F. HUNT, *University of Chicago*, AND IVAN MENSCH, *Washington University School of Medicine*.

### S-R Behavior Theory: Current Status and Future Prospects

ALLEN D. CALVIN, *Hollins College*, Chairman

Participants: CLETUS J. BURKE, *Indiana University*, MURRAY SIDMAN, *Walter Reed Army Institute of Research*, THEODORE LANDSMAN, *Vanderbilt University*, AND GREGORY KIMBLE, *Duke University*.

Discussants: MICHAEL SCRIVEN, *Department of Philosophy, Swarthmore College*, AND ALLEN D. CALVIN, *Hollins College*.

### Word Associations as Mediators of Stimulus Equivalence and Response Equivalence

JAMES J. JENKINS, *University of Minnesota*, Chairman

Response chaining in verbal transfer. JARVIS BASTIAN, *University of Michigan*.

A comparison of similar versus associated stimuli in facilitating response transfer. JAMES J. RYAN, III, *Wayne State University*.

The effect of word association strength on the degree of stimulus and response equivalence. JEAN CARLIN, *North Park College*.

Semantic generalization as related to word association. WALTER D. MINK, *University of Minnesota*.

Discussant: DON E. DULANY, JR., *University of Illinois*.

### New Ideas in Consulting Psychology

WILLARD A. KERR, *Illinois Institute of Technology*,  
Chairman

Company image research. JOHN BOLGER, *John Bolger Associates*.

Individualism in group dynamics. ALAN J. FREDIAN, *John Patton Associates*.

Evaluation modality orientation. HUGO O. ENGLEMAN, *University of Wisconsin*.

Measurement of group cohesiveness. BERNARD GOLDMAN, *Roosevelt University*.

Discussants: LEROY N. VERNON, *Personnel Laboratory*,  
AND HENRY C. SMITH, *Michigan State University*.

## SEMINARS

### Perceptual-Motor Performance

DON LEWIS, *State University of Iowa*, Chairman

The component dimensions of psychomotor skill. KARL U. SMITH, *University of Wisconsin*.

Human skill and system performance. FRANKLIN V. TAYLOR, *Naval Research Laboratory*.

Problems in measuring skilled performance. HARRY P. BAHRICK, *Ohio Wesleyan University*.

### Technical Career Programs for Engineers and Scientists in Industry

JAMES E. BOYCE, *General Motors Corporation*,  
Chairman

Is there a need for technical career programs? SIMON HERMAN, *Sandia Corporation*.

Current practices and future trends. LEE E. DANIELSON, *University of Michigan*.

Establishing a program. LESLIE V. FRENCH, *Whirlpool-Seeger Corporation*.

Discussants: ALBERT A. CANFIELD, *Wayne State University*, AND CARL F. FROST, *Michigan State University*.

### The School Psychologist in US Office of Education Cooperative Research Projects

WILLIAM ITKIN, *Chicago Board of Education*,  
Chairman

Various factors in the educational placement of mentally retarded children. VIOLA M. CASSIDY, *Ohio State University*.

Social adequacy and social failure of mentally retarded children. JAMES E. KELLER, *Wayne County Training School*.

A cooperative research project in a large city school system. EUGENE RICHARDS, *Chicago Board of Education*.

Discussant: MARIE SKODAK, *Dearborn Board of Education*.

PROCEEDINGS OF THE TWENTY-NINTH ANNUAL MEETING  
OF THE  
EASTERN PSYCHOLOGICAL ASSOCIATION

GORHAM LANE, Secretary

*University of Delaware*

THE twenty-ninth Annual Meeting of the Eastern Psychological Association was held on April 11 and 12, 1958 at the Bellevue-Stratford in Philadelphia. Approximately 1,768 persons registered at the meetings. Of these, 1,044 were members of the association, 274 were new members who joined the association at the meetings, and 450 were guests. The present active membership of the EPA totals 3,151.

Harold Schroder was in charge of local arrangements for the meetings. He was assisted by Eliot Stellar, Mildred L. Sylvester, Jack Miner, John L. Kennedy, Bernard J. Fitzgerald, and Alec J. Slivinske. The Program Committee, consisting of John Lanzetta, Chairman, James Deese, and Julius Wishner scheduled 203 papers (presented in 27 sessions), 4 symposia, 4 special meetings, 3 invited addresses, 1 film, and 1 demonstration. Stuart W. Cook presented the annual Presidential Address entitled "The Psychologist of the Future: Scientist, Professional, or Both?"

Among the more significant items transacted at the Annual Business Meeting and at the Board of Directors Meeting were the following:

1. Carl Pfaffmann was elected President (1958-59), and Fred S. Keller and Richard L. Solomon were elected to the Board of Directors (1958-61).

2. The following appointments were made: Committee on Local Arrangements, Jack Miner, Chairman, and Evelyn Raskin; Program Committee, David Ehrenfreund to serve with Julius Wishner, Chairman, and John Lanzetta; Elections Committee, Leo Hurvich to serve with Stuart W. Cook; Membership Committee, Robert Chin to serve with Thomas Reese; Auditing Committee, Edward Girden and Leonard Kogan; and Representative to AAAS Council, Solomon Asch to serve with Murray Sidman.

3. The following actions of the Board of Directors were announced: (a) The Secretary's annual honorarium will be increased from \$200 to \$700. (b) A resolution was adopted that "all non-current records of the Association remain in the possession of Dr. Gorham Lane and that the Board looks with favor on the continuation of work on a history of EPA." (c) Gorham Lane was appointed as Historian of EPA in recognition of his services past and anticipated. (d) The

Secretary was instructed to thank officially various personnel at the University of Delaware for the use of facilities during the past six years. (e) It was voted that the cost of the printed program be increased to fifty cents. (f) It was voted that the annual dues and guest fees remain at \$2.00 for the next year. (g) The board endorsed the proposition that those by-law changes necessary to effect an amalgamation of the offices of Secretary and Treasurer be prepared for submission to the membership.

4. The report of the Secretary, having been distributed to the Board of Directors prior to the meetings, was approved.

5. It was announced that the 1959 meetings would be held at the Chalfonte-Haddon Hall in Atlantic City, April 3 and 4.

6. Seven non-APA members were approved for membership, and one was rejected.

7. The Eastern Psychological Association voted to express its thanks to the Committee on Local Arrangements and to the American Psychological Association Central Office.

8. George Miller made the following resolution which was adopted unanimously by the membership:

The Eastern Psychological Association most strongly protests against the treatment of many of its members by the Bellevue-Stratford Hotel at the Philadelphia meeting in April, 1958. The refusal of the Hotel to furnish rooms to many of our members who held reservations confirmed days or weeks in advance has caused serious personal inconvenience to the members affected, has scattered our membership and interfered with the free and easy flow of communication which it is the purpose of this convention to promote. The Secretary is instructed to make our displeasure known to the Bellevue-Stratford Hotel.

9. Carl Pfaffmann made the following resolution which was adopted by the membership:

Resolved that the Eastern Psychological Association Board of Directors acknowledge publicly the indebtedness of the Association to Dr. Gorham Lane, who for six years has faithfully and cheerfully served the society as Secretary and chief administrative officer. He has attended to interminable details, solved innumerable problems, protected a half dozen presidents from executive brutality, and more

than any other person made it possible for EPA to achieve its purpose of advancing the science of psychology. He has earned a degree of gratitude that can only be paid in the affection and respect that those who know his work universally feel for him.

10. The interim report and proposed budget for 1958-59 were approved as presented by the Treasurer, Roy B. Hackman.

11. Carl H. Rush was elected Secretary for three years (1958-1961).

## PROGRAM

### PAPER SESSIONS

#### Human Learning

WALLACE LAMBERT, *McGill University*, Chairman

Learning as a function of anxiety and task conditions. WILSON L. HUNT, *Canandaigua VA Hospital*.

Rate of learning in a pursuit rotor task at a constant work-rest ratio with varying work and rest periods. ROGER PETTI AND ROBERT PLUTCHIK, *Hempstead, New York and Hofstra College*.

The temporal development of perception in relation to discrimination learning. J. W. KASWAN, *Yale University*.

Irrelevant stimuli and complex visual discrimination. MILTON H. HODGE, *Mary Washington College of the University of Virginia*.

Multiple and single stimulus presentation in children's color discrimination learning. LEWIS P. LIPSITT, *Brown University*.

An investigation of the interchangeability of Estes'  $\Theta$ . PAUL J. WOODS, *Hollins College*.

An exploratory study on the effects of tranquilizers on competitive paired-associates learning. JONATHAN W. BROWN, ALBERTO DiMASCIO, GERALD L. KLERNAN, MILTON GREENBLATT, AND MAX RINKEL, *Boston Psychopathic Hospital, Massachusetts Mental Health Center*.

#### Clinical

LAURANCE F. SHAFFER, *Teachers College, Columbia University*, Chairman

The influence of music upon verbal participation in group psychotherapy. LEO SHATIN AND CARL N. ZIMET, *Albany VA Hospital and Yale University*.

Personal adjustment and assumed similarity to parents. MELVIN MANIS, *University of Pittsburgh*.

An investigation of the effectiveness of a group therapy program, including the child and his mother, for the remediation of reading disabilities. FLORENCE SHAT-TER, *Long Island Consultation Center, Inc.*

The effect of tranquilizing drugs and rehabilitation activities on ward behavior. ALFRED E. GOLDMAN AND HAROLD ZAMANSKY, *Norristown State Hospital and Northeastern University*.

Personality concomitants of child amputees. JEROME SILLER, *New York University*.

Visual figural aftereffects and reversible figures in mentally retarded and normal adolescent males. HERMAN H. SPITZ AND LEONARD S. BLACKMAN, *Edward R. Johnstone Training and Research Center, Bordentown, New Jersey*.

The formation of learning sets by mentally retarded children in an object-quality discrimination problem situation. G. J. WISCHNER, H. W. BRAUN, AND R. A. PATTON, *University of Pittsburgh*.

A comparison of direct, indirect, and fantasy measures of identification. JAMES BIERI AND ROBIN LOBECK, *New York School of Social Work, Columbia University*.

#### Brain Mechanisms I

LEON S. OTIS, *Johns Hopkins University*, Chairman

Self-injection in the Lypothalamus. JAMES OLDS, *University of Michigan*.

The effects of lesions of the rostral limbic cortex on escape behavior in the rat. J. M. HARRISON AND M. LYON, *Boston University*.

Disturbances of learning and retention following bilateral medial temporal lobe resections in monkeys. J. ORBACH, B. MILNER, AND T. RASMUSSEN, *Montreal Neurological Institute and McGill University*.

The effects of lesions in septal nuclei and fornix components upon escape behavior in the rat. M. LYON AND J. M. HARRISON, *Boston University*.

Effects of hippocampal lesions on avoidance behavior. DOUGLAS KIMURA, *McGill University*.

Relation of the amygdala complex to deprivation and reward determinants of food motivated behavior in monkeys. J. S. SCHWARTZBAUM, *Institute of Living, Hartford, Connecticut*.

The effect of lesions to the caudate nuclei and corpus callosum on delayed alternation in the monkey. BERNARD M. MIGLER, *Montefiore Hospital and University of Pittsburgh*.

Effects of cortical lesions in monkeys on critical flicker frequency. MORTIMER MISHKIN AND LAWRENCE WEISKRANTZ, *National Institute of Mental Health and Cambridge University*.



### Audition

J. C. R. LICKLIDER, *Bolt, Beranek and Newman*,  
Chairman

The application of signal detection theory to the reception of filtered speech. LOUIS R. DECKER AND IRWIN POLLACK, *Operational Applications Laboratory, Bolling Air Force Base*.

The interaction of pitch and loudness discrimination. J. DONALD HARRIS, *USN Medical Research Laboratory, New London, Connecticut*.

Duotone masking. RICHARD H. EHMER, *USN Medical Research Laboratory, New London, Connecticut*.

Auditory sensitization as a factor in temporary hearing loss. WILLIAM J. TRITTIPOE, *Operational Applications Laboratory, Bolling Air Force Base*.

Assessment of hearing loss from high-tensity noise. J. J. O'HARE, *USN Medical Research Laboratory, New London, Connecticut*.

The difference limen for loudness of a tone signal at various S/N ratios. CHARLES R. PETTIE AND J. DONALD HARRIS, *USN Medical Research Laboratory, New London, Connecticut*.

The effects of hypoxemia upon the electrical response of the cochlea. W. L. GULICK, *University of Delaware*.

The function of side-tone and ambient noise in determining speech level. F. LOREN SMITH AND WILLARD F. MEEKER, *University of Delaware and Radio Corporation of America, Camden, New Jersey*.

### General Experimental

HALSEY M. MACPHEE, *University of Delaware*,  
Chairman

Effects of knowledge of results on the learning and structure of a complex psychomotor skill. RANDALL N. CHAMBERS, *Rutgers University*.

On the reduction of choice reaction times with practice. G. H. MOWBRAY AND M. V. RHOADES, *Johns Hopkins University*.

Tilt adaptation between the vertical and horizontal. MILDRED MISTOVICH AND RICARDO B. MORANT, *Brandeis University*.

Compensatory gain shift of the human tracker. CLARENCE L. TIPTON, *USN Research Laboratory, Washington, D. C.*

A comparison of zero and fourth-order aided compensatory tracking systems as a function of course frequency. RUBE CHERNIKOFF, J. H. BOWEN, AND HENRY P. BIRMINGHAM, *USN Research Laboratory, Washington, D. C.*

Decision making in a complex perceptual-motor task. GUSTAVE J. RATH, *IBM Research Center, Ossining, New York*.

Delayed "tracking" of a discrete informational source.

LAWRENCE B. JOHNSON AND IRWIN POLLACK, *Operational Applications Laboratory, Bolling Air Force Base*.

Pattern analysis in a set containing meaningful figures.

E. T. KLEMMER, *IBM Research Center, Ossining, New York*.

### Verbal Behavior

CHARLES N. COFER, *University of Maryland*, Chairman

Retention of paired associates as a function of percentage of occurrence of response members. ALBERT E. GOSS AND JANE NELSON, *University of Massachusetts*.

Context as a mediating factor in the clustering of adjectives and nouns. RICHARD C. GONZALEZ AND CHARLES N. COFER, *University of Maryland*.

The role of repetition in the formation and strengthening of associations. IRVIN ROCK AND WALTER HEIMER, *New School for Social Research, New York*.

The learning and forgetting of meaningful material. JOHN F. HALL AND A. UGELOW, *Pennsylvania State University*.

Meaning and familiarity in associative learning. WILLIAM EPSTEIN, IRVIN ROCK, AND CARL B. ZUCKERMAN, *New School for Social Research, New York*.

Intralist response similarity in stimulus predifferentiation. BENNET B. MURDOCK, JR., *University of Vermont*.

The effects of bilingualism on naming. SUSAN M. ERVIN, *Harvard Graduate School of Education*.

Forgetting of connected discourse as a function of similarity of topic. NORMAN J. SLAMECKA, *University of Vermont*.

### Visual Perception

SEYMOUR WAPNER, *Clark University*, Chairman

The effect of labyrinthian and figural stimulation on the perception of the apparent median plane. RICARDO B. MORANT, *Brandeis University*.

Visual discrimination of straight and curved line forms. JOHN GAITO, *Air Crew Equipment Laboratory, Philadelphia*.

Adaptation to artificially increased distance of the hand from the eye. MELVIN SCHLANK AND RICHARD HELD, *Brandeis University*.

Visual recognition. LEON D. HARMON, *Bell Telephone Laboratories, Inc.*

The effect of familiarity on visual form perception. JOHN COULES, *Tufts University*.

Stimulus correlates for the perceived illumination of a surface. JACOB BECK, *University of Pennsylvania*.

Retinal vs. phenomenal orientation in the perception of symmetry. ROBIN LOBECK AND IRVIN ROCK, *New School for Social Research, New York*.

The effect of extraneous asymmetrical eye torsion on visual clarity. JOSEPH H. MCFARLAND, *Clark University*.

### Animal Behavior I

WALTER C. STANLEY, *Roscoe B. Jackson Memorial Laboratory, Chairman*

Traumatic avoidance learning: The effect of preventing escape responses in a free responding situation. A. H. BLACK AND N. J. CARLSON, *Harvard University and Western Reserve University*.

Hunger drive, deprivation, and the day-night cycle. JOHN K. BARE AND GEORGE CICALA, *College of William and Mary*.

Developmental environment as a factor affecting individual difference in "autonomic reactivity" of mice in an open-area test and in obstruction of approach responses. ETHEL TOBACH AND T. C. SCHNEIRLA, *American Museum of Natural History, New York*.

A method of equating intensity of traumatic stimulation for rats of different ages. DOUGLAS K. CANDLELAND, ROBERT TEGHTSOONIAN, AND BYRON A. CAMPBELL, *Princeton University and Harvard University*.

Two determinants of the emergence of anticipatory avoidance behavior in the shuttlebox. LEON J. KAMIN, *McMaster University*.

Discrimination and reversal learning as a function of change of sensory stimulation. DONALD G. FORGAYS AND HARRY LEVIN, *Rutgers University and Cornell University*.

Secondary reinforcement as affected by reward schedule and the testing situation. M. R. D'AMATO AND R. LACHMAN, *New York University*.

Amount of consummatory activity and performance in a modified T maze. ROBERT D. HALL AND J. W. KLING, *Brown University*.

### Tests and Methods

THELMA HUNT, *George Washington University, Chairman*

Personality factors in the selection of job duties. RICHARD P. WALSH, *University of Maryland*.

AVA as a predictor of occupational hierarchy. PETER F. MERENDA AND WALTER V. CLARKE, *Walter V. Clarke Associates, Inc.*

A summational method for checking the computations of a correlation matrix. JOHN A. ANTOINETTI, *Life Insurance Agency Management Association, Hartford, Connecticut*.

Some applications of electronic computers to tests and measurements. NATHAN JASPEN, *National League for Nursing, New York*.

Posture as a function of time. FRANK PIERCE JONES AND D. N. O'CONNELL, *Tufts University*.

An information storage and retrieval system for bibliographic research. LOIS-ELLIN DATTA, *Courtney and Company, Philadelphia*.

### Social Psychology

ALBERT PEPITONE, *University of Pennsylvania, Chairman*

The authoritarian person's perception of his relationship with his father. JAMES KOUTRELAKOS, *Stevens Institute of Technology*.

The perception of mathematical properties of interpersonal relations. CLINTON DE SOTO, *Johns Hopkins University*.

The effect of threat on interpersonal attraction. ROBERT J. KLEINER, *Commonwealth Mental Health Center, Philadelphia*.

A longitudinal study of the effect of medical education on attitudes. LEONARD D. ERON, *Rip Van Winkle Foundation, Hudson, New York*.

Test of a mathematical model for opinion change, with applications to the primacy-recency problem. NORMAN H. ANDERSON, *Yale University*.

Small group decision making as a function of the distribution of problem-relevant information. VERA T. KANAREFF, *Fels Group Dynamics Center, University of Delaware*.

An experimental study of apparent social behavior. SOLIS L. KATES AND LUCIEN BUCK, *University of Massachusetts*.

Acceptance of Jews and gentiles by Jewish children. SAMUEL A. WEISS, *New York University*.

### Personality I

ANNE ROE, *Franklin D. Roosevelt VA Hospital, Chairman*

GSR conditioning and anxiety as measured by basal conductance. PAUL A. OBRIST, *University of Rochester*.

The probability of success. JAMES C. DIGGORY, *University of Pennsylvania*.

Test anxiety, self-acceptance, and task performance in an induced failure situation. LOUIS D. COSTA, *Albert Einstein College of Medicine, Yeshiva University*.

Gestalt-dominance and mental development in adults: II. JEROME E. PODELL, *Worcester State Hospital*.

Weaning, infantile speech development, and "normal" speech disturbances in young adult life. GEORGE F. MAHL AND STANISLAV V. KASL, *Yale University and University of Michigan*.

Sex differences in inferring personality traits. DAVID SHAPIRO AND RENATO TAGIURI, *Harvard University*.  
Sex differences in social desirability ratings of trait descriptive terms. EMORY L. COWEN, *University of Rochester*.

Conforming behavior and personality variables. MORTIMER H. APPLEZWEIG AND GEORGE MOELLER, *Connecticut College*.

### Applied Psychology

ALBERT GLICKMAN, *USN Personnel Research Field Activity, Washington, D. C.*

Verbal transfer of training to a psychomotor task. ISADORE GOLDBERG, *University of Maryland*.

Effect of length of observing time on earth satellite visibility. W. D. GARVEY, IRENE S. GULLEDGE, AND JEAN B. HENSON, *USN Research Laboratory, Washington, D. C.*

The effect of grouping on quantitative reading of instrument dials. BERNARD L. RYACK, *University of Massachusetts*.

Ground tests of the direction-indicating characteristics of four aircraft exterior light systems. JOHN E. ROBINSON, JR., *Applied Psychology Corporation, Arlington, Virginia*.

The relationship between supervisory characteristics and attitudes of subordinates. RUSSELL A. CLARK, AARON J. SPECTOR, AND ALBERT S. GLICKMAN, *USN Personnel Research Field Activity, Washington, D. C.*

Instructor training for first-line supervisors in the Navy afloat. MYRON A. FISCHL, LOIS-ELLEN DATTA, AND DOUGLAS COURTNEY, *Courtney and Company, Philadelphia, Pennsylvania*.

Occupations and stereotypes of ethnic groups. JOHN J. LA GAIPA, *USN Personnel Research Field Activity, Washington, D. C.*

### Cognitive Processes

MALCOLM G. PRESTON, *University of Pennsylvania, Chairman*

Context effects of one-word, two-word, and three-word stimuli on word associations. BARBARA S. MUSGRAVE, *University of Massachusetts*.

Concept formation and complexity. LISE WERTHEIMER, *Bryn Mawr College*.

The effect of the number of pre-utilization functions on functional fixedness in problem solving. JOHN H. FLAVELL, ALLAN COOPER, AND ROBERT H. LOISELLE, *University of Rochester*.

Response sequences and run hypotheses in choice tasks. JACQUELINE J. GOODNOW, IRVIN RUBINSTEIN, AND ARDIE LUBIN, *Walter Reed Army Institute of Research*.

Cognitive and response factors in secondary generalization and discrimination. H. B. RANKEN AND G. F. HUNTER, *University of Pennsylvania*.

Some factors affecting matching solutions in two-choice situations. IRVIN RUBINSTEIN, *Walter Reed Army Institute of Research*.

Reinforcement and "hypotheses" in a matching-to-sample problem with humans. WILLIAM E. MONTAGUE, *Mary Washington College of the University of Virginia*.

Information and memory in a multiple-choice task. ROBERT TEGHTSOONIAN, *Harvard University*.

### Operant Behavior I

WILLIAM N. SCHOENFELD, *Columbia University, Chairman*

Light as a reinforcer for bar pressing in rats as a function of direction of stimulus change and relative stimulus novelty. JOHN S. ROBINSON, *Princeton University*.

Intermittent reinforcement of a complex response in a chimpanzee. CHARLES B. FERSTER, *Indiana University Medical Center*.

Interaction between responding on two levers under variable-interval reinforcement and extinction. LEWIS R. GOLLUB, *Harvard University*.

Stimulus generalization in the pigeon along intensity and wave length continua. DONALD S. BLOUGH, *National Institute of Mental Health*.

A two-response "tandem" schedule of reinforcement. FRANCIS MECHNER AND IRWIN ROSENBERG, *Schering Corporation, Bloomfield, New Jersey*.

Changes in  $S^D$  and  $S^A$  rates during an operant discrimination. ARTHUR L. KOROTKIN, ROBERT M. HERRICK, AND JEROME L. MYERS, *Aviation Medical Acceleration Laboratory, Johnsville, Pennsylvania*.

Some characteristics of fixed-ratio schedules of conditioned reinforcement in chimpanzees. ROGER T. KELLEHER, *Smith, Kline, and French Laboratories*.

Interaction among components of a multiple reinforcement and shock-avoidance schedule. R. J. HERRNSTEIN AND JOSEPH V. BRADY, *University of Maryland and Walter Reed Army Institute of Research*.

### Developmental

VINCENT NOWLIS, *University of Rochester, Chairman*

Comparison of preschool Stanford-Binet and school-age Wechsler Intelligence Scale for Children. FRANCES FUCHS SCHACHTER AND VIRGINIA APGAR, *College of Physicians and Surgeons, Columbia University*.

Interactions of sex, birth order, and dependency with behavior problems and symptoms in emotionally disturbed preschool children. ANN W. HAEBERLE, *Child Development Center, New York*.

Emergence and perpetuation of leadership in small groups of adolescents with behavior problems. ROBERT OVRYN, *Hofstra College*.

Relationships between social need strivings and the development of heterosexual affiliations. WILLIAM J. MEYER, *University of Pittsburgh*.

A developmental study of the concept of symmetry in children. DAVID RIDDERHEIM AND NISSIM LEVY, *Brown University*.

The choice to exhibit. HARRY LEVIN AND ALFRED L. BALDWIN, *Cornell University*.

Conceptual association by bright subjects as related to age and mode of object representation. ROBERT S. DAVIDON AND NICHOLAS LONGO, *Bryn Mawr College*.

Copying of adult color choices by kindergarten children. JUDY F. ROSENBLITH, *Brown University*.

### Animal Behavior II

STEWART H. HULSE, JR., *Johns Hopkins University*,  
Chairman

"Gentling" and its effects on growth and activity in hooded rats. DAN EHRLICH AND GORDON J. MOGENSEN, *McGill University*.

A study of the relation between habituation and imprinting. LEONARD ROSENBLUM AND HOWARD MOLTZ, *Brooklyn College*.

Imprinting and associative learning: The stability of the following response in Pekin ducks. HOWARD MOLTZ AND LEONARD ROSENBLUM, *Brooklyn College*.  
Size constancy in the duckling. NICHOLAS PASTORE, *Queens College*.

Reversal-learning in fish and rat. JEROME WODINSKY, DOUGLAS CANDLAND, AND M. E. BITTERMAN, *Princeton University and Bryn Mawr College*.

Emotional reactions of rats to the pain of others. RUSSELL M. CHURCH, *Brown University*.

Visual depth discrimination of hooded and albino rats less than 30 days of age. R. D. WALK, E. J. GIBSON, AND T. J. TIGHE, *Cornell University*.

The classification of social stimuli: "Social" and "non-social" distraction in the albino rat. HARRY L. JACOBS AND F. LOREN SMITH, *Bucknell University and University of Delaware*.

### Vision

WILLIAM R. BUSH, *Radio Corporation of America*,  
Waltham, Massachusetts, Chairman

The apparent brightness of maxima and minima of spatial luminance distributions. EMANUEL AVERBACH, *Bell Telephone Laboratories, Inc.*

The interocular transfer of the disappearance of stopped images. JOHN KRAUSKOPF AND LORRIN A. RIGGS, *Brown University*.

Test eye thresholds under transient ipsilateral and contralateral photopic adapting stimulation. GILLRAY KANDEL, *Massachusetts General Hospital*.

Minimal conditions essential for complete relearning of hand-eye coordination with prismatic distortion of vision. ALAN V. HEIN AND RICHARD M. HELD, *Brandeis University*.

Latencies of the electroretinogram and optic lobe evoked potentials in the chicken. GEORGE H. CRAMP-  
TON, *Walter Reed Army Institute of Research*.

Contrast thresholds for a recognition task. ROBERT M. BOYNTON, CHARLES ELWORTH, AND RICHARD M. PALMER, *University of Rochester*.

Level of light adaptation and the human electroretinogram. WILLIAM R. BIEDSDORF AND JOHN C. ARM-  
INGTON, *Walter Reed Army Institute of Research*.

### Personality II

F. KENNETH BERRIEN, *Rutgers University*, Chairman

The stimulating versus cathartic effects of a vicarious aggressive activity. SEYMOUR FESHBACH, *University of Pennsylvania*.

Perceptual and personality changes in sensory deprivation. SANFORD J. FREEDMAN AND HENRY U. GRUN-  
BAUM, *Massachusetts Mental Health Center and  
Brandeis University*.

Extroversion, neuroticism, and motor learning. CHARLES J. VAUGHAN AND A. W. BENDIG, *University of Pittsburgh*.

Visual hallucinations during sensory deprivation. J. A. VERNON AND T. E. MCGILL, *Princeton University*.

Body temperature and psychological ratings during sleep deprivation. HAROLD L. WILLIAMS AND ED-  
WARD J. MURRAY, *Walter Reed Army Institute of  
Research*.

The effects of sleep deprivation on social behavior. MELVIN COHEN, EDGAR H. SCHEIN, KAI T. ERIK-  
SON, WINFRED F. HILL, AND EDWARD J. MURRAY,  
*Walter Reed Army Institute of Research*.

Thematic apperception during sleep deprivation. ED-  
WARD J. MURRAY, *Walter Reed Army Institute of  
Research*.

The effect of 79 hours of sleep loss on a complex men-  
tal task. BETTY SHANKS AND JACQUELINE GOODNOW,  
*Walter Reed Army Institute of Research*.

### Clinical Testing

JULIAN MELTZOFF, VA, *Brooklyn*, Chairman

Communication patterns with altered brain function. JOSEPH JAFFE, ROBERT L. KAHN, AND MAX FINK,  
*Hillside Hospital*.

The relation of F Scale score to behavioral and physio-  
logical response with altered brain function. ROBERT  
L. KAHN AND MAX FINK, *Hillside Hospital*.



A test of the validity of a psychiatric hospital adjustment scale. RITA WERTHEIMER, CONSTANCE NEWBURY, JOSEPH CHARNEY, AND HARRY ROSS, *Western Psychiatric Institute, University of Pittsburgh*.

The semantic character of color. NORBERT L. MINTZ AND V. MORGAN, *Brandeis University and Orlando Guidance Clinic*.

The BII, a measure of motivations. GEORGE MOELLER AND MORTIMER H. APPELZWEIG, *Connecticut College*.

### Schizophrenia

E. J. SHOEN, JR., *Teachers College, Columbia University*, Chairman

Simple and complex learning in early schizophrenia. SARNOFF A. MEDNICK AND ROBERT DEVITO, *Harvard University*.

The effect of group problem solving experience upon social withdrawal in chronic schizophrenics. HERBERT E. SPOHN AND WILLIAM WOLK, *Franklin D. Roosevelt VA Hospital*.

Verbal affect responses of schizophrenics as a function of number of reinforcements and rate of acquisition. KURT SALZINGER AND STEPHANIE PISONI, *Biometrics Research, New York State Department of Mental Hygiene*.

Changes in Porteus Maze scores of brain operated schizophrenics after an interval of eight years. AARON SMITH, *Yeshiva University and the Research Foundation for Mental Health, Inc.*

Shift of sensory set in schizophrenics and normals. SAMUEL SUTTON, GAD HAKEREM, MAURICE PORTNOY, AND JOSEPH ZUBIN, *Psychiatric Institute and Brooklyn State Hospital*.

A comparison of fathers and mothers of acutely ill and chronically ill schizophrenics: Parent-patient relationships as reflected in personal beliefs. LEONARD W. KRINSKY, *Adelphi College*.

Reinforcement of verbal affect responses of normals during the interview. STEPHANIE PISONI AND KURT SALZINGER, *Biometrics Research, New York State Department of Mental Hygiene*.

Extraversion, neuroticism, and overinclusion. OAKLEY S. RAY AND FRANK M. LACKNER, *University of Pittsburgh*.

### Physiological

ELIOT STELLAR, *University of Pennsylvania*, Chairman

The effect of chlorpromazine on the brightness difference thresholds of rats with habits and fixations.

JOAN Z. ROBINS, R. S. FELDMAN, P. ELLEN, AND W. T. LIBERSON, *University of Massachusetts*.

The effect of lysergic acid diethylamide upon delayed alternation performance in monkeys. MURRAY E.

JARVIK AND STEPHAN CHOROVER, *Albert Einstein College of Medicine, Yeshiva University*.

Chronic avoidance behavior and the development of gastroduodenal ulcers in the rhesus monkey. J. V. BRADY, R. W. PORTER, D. G. CONRAD, AND J. W. MASON, *Walter Reed Army Institute of Research*.

"Anxiety" conditioning and changes in steroid levels in the rhesus monkey. D. G. CONRAD, J. W. MASON, AND J. V. BRADY, *Walter Reed Army Institute of Research*.

Thirst produced by intravenous injections of hypertonic saline solution. DONALD NOVIN, *Yale University*.

The effect of amphetamine on forced drinking. PETER DERKS AND PHILIP TEITELBAUM, *Harvard University*.

The effect of D-lysergic acid diethylamide (LSD-25) on escape response in the rat. CHARLES L. HAMILTON, *VA Hospital, Coatesville, Pennsylvania*.

The effects of the intravenous infusion of epinephrine and norepinephrine on a conditioned response in the cat. SETH K. SHARPLESS, *Albert Einstein College of Medicine, Yeshiva University*.

### Sexual Behavior

RONALD H. FORGUS, *University of Pennsylvania*, Chairman

Individual differences in the response of male rats to androgen. HARRY FOWLER AND FRANK A. BEACH, *Yale University*.

The effects of enforced sexual inactivity following ejaculation upon later copulatory behavior in the male rat. RICHARD E. WHALEN AND FRANK A. BEACH, *Yale University*.

The effect of castration of the male rat upon olfactory sensitivity to estrous female urine. WILLIAM J. CARR AND BEVERLY PENDER, *Bucknell University*.

The effects of early avoidance training and rearing conditions on the sexual behavior of the rat. PHILIP G. ZIMBARDO, *Yale University*.

The effects of copulatory experience on the arousal of sexual behavior in the male rat. RONALD G. RABEDEAU AND RICHARD E. WHALEN, *Yale University*.

### Operant Behavior II

FRED S. KELLER, *Columbia University*, Chairman

Discrimination of the omission of members of a periodic sequence. DOUGLAS ANGER, *Upjohn Company, Kalamazoo, Michigan*.

An analysis of operant discrimination and differentiation in chronic psychotics. OGDEN R. LINDSLEY, *Harvard Medical School and Metropolitan State Hospital, Waltham, Massachusetts*.

Response produced cue discrimination in the rat, pigeon, and the monkey. WILLIAM WAGMAN AND ROBERT BERRYMAN, *Columbia University*.

Response sequence length in a conflict situation. ROBERT BERRYMAN AND WILLIAM WAGMAN, *Columbia University*.

Positive reinforcement as a factor in conditioned suppression. LARRY STEIN, MURRAY SIDMAN, AND J. V. BRADY, *VA Research Laboratories in Neuropsychiatry, Pittsburgh, Pennsylvania and Walter Reed Army Institute of Research*.

Concurrent suppressing and facilitating effects of a stimulus that precedes unavoidable shock. MURRAY SIDMAN, *Walter Reed Army Institute of Research*.

Sequential relations of holding and other response-class properties in escape training. SAM L. CAMPBELL, *Creedmoor Institute for Psychobiologic Studies, Queens Village, New York*.

Behavior under extended exposure to a high value, fixed-interval reinforcement schedule. WILLIAM W. CUMMING AND WILLIAM N. SCHOENFELD, *Columbia University*.

#### Sensory and Perceptual Functions

JOSEPH W. WULFECK, *Tufts University*, Chairman

The pre-exposure tolerance of the dark adapted peripheral retina. JOHN A. HANSON, *Tufts University*.

The effect of pre-exposure size on foveal dark adaptation. EDYTHE M. S. ANDERSON, *Tufts University*.

The effects of centrally fixated pre-exposure sizes on peripheral dark adaptation. RICHARD P. WINTERBERG, *Tufts University*.

Visual recognition of meaningful material under conditions of reduced cue: The effects of variations in training. EUGENE S. GOLLIN, *Queens College*.

The enzymatic nature of taste stimulation. EARL C. HAGSTROM, *Princeton University*.

Absolute judgments of odor intensity. TRYGG ENGEN AND CARL PFAFFMANN, *Brown University*.

Short-term information storage with multichannel auditory presentation. P. ROBERT KNAFF AND IRWIN POLLACK, *Operational Applications Laboratory, Bolling Air Force Base*.

#### Projective Tests

SOLOMON MACHOVER, *Kings County Hospital*, Chairman

Texture responses on the Rorschach and in a sorting test. MARY D. AINSWORTH AND JAMES L. KUETHE, *Johns Hopkins University and Sheppard and Enoch Pratt Hospital, Baltimore, Maryland*.

Effects of error correction on judgments based on Rorschach responses. LOUIS EVERSTINE AND ROY M. HAMLIN, *Western Psychiatric Institute, University of Pittsburgh*.

The Rorschach body image barrier scores of patients with internal and external psychosomatic diseases.

C. R. EIGENBRODE AND W. G. SHIPMAN, *Staunton Clinic, University of Pittsburgh*.

Aggression and the Rosenzweig picture-frustration study. M. WASMAN, J. W. KASWAN, AND L. Z. FREEDMAN, *Yale University*.

The reliability of the achievement motive. ROBERT C. BIRNEY, *Amherst College*.

Effects of a variation in instructions and pictorial stimuli on responses to TAT-like cards. NORMAN SOLKOFF, *Connecticut State Hospital*.

#### Brain Mechanisms II

HANS-LUKAS TEUBER, *New York University College of Medicine*, Chairman

Excitability of geniculocalcarine system as measured with binocular light flashes. I. H. WAGMAN AND W. S. BATTERSBY, *Mount Sinai Hospital*.

Intellectual deficits in patients with space-occupying lesions of the cerebrum. M. POLLACK, W. S. BATTERSBY, R. L. KAHN, AND M. B. BENDER, *Mount Sinai Hospital*.

Studies on the effects of subcortical brain surgery (chemopallidectomy and thalamectomy) on intellectual functioning. MANUEL RIKLAN, LEONARD DILLER, AND CARMINE CASELLA, *St. Barnabas Hospital and Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center*.

Tactile size discrimination after penetrating brain injury in man. SIDNEY WEINSTEIN, JOSEPHINE SEMMES, LILA GHENT, AND HANS-LUKAS TEUBER, *New York University-Bellevue Medical Center*.

Intensity of stimulation and perception of simultaneous stimuli in cerebral dysfunction. H. KORIN AND M. FINK, *Hillside Hospital, Glen Oaks, New York*.

Effects of cortical stimulation on response rate during performance and extinction. NEAL M. BURNS, *McGill University*.

Magnitude of striatal lesions and avoidance behavior in cats. ROBERT L. THOMPSON, JUAN A. GOMEZ, CHRISTIAN A. HOVDE, AND FRED A. METTLER, *Columbia University*.

Harmonics of the electroencephalogram as predictors of reaction time during sleep. PAUL D. COLEMAN, FLORENCE E. GRAY, AND KYOZO WATANABE, *Tufts University*.

#### Conditioning

DAVID ZEAMAN, *University of Connecticut*, Chairman

A technique for classical appetitive conditioning of the white rat. DONALD D. JENSEN, RICHARD C. DEBOLD, AND N. E. MILLER, *Yale University*.

The effect of strength of thirst on classical conditioning in the albino rat. RICHARD C. DEBOLD, *Yale University*.

The relationship between continuously recorded anticipatory goal responses and instrumental responses. NEAL E. MILLER, *Yale University*.

The effect of nonreinforced pre-exposure of the to-be-conditioned stimulus on classical conditioning. R. E. LUBOW AND A. U. MOORE, *Cornell University*.

Conditioned talking in the mynah bird. NORMAN M. GINSBURG, *New York State Psychiatric Institute*.

Social conditioning of domestic fowl. WENDELL I. SMITH AND E. B. HALE, *Bucknell University and Pennsylvania State University*.

Avoidance learning as a function of several training conditions and of strain differences in rats. ARLO K. MYERS, *Yale University*.

Discriminative behavior following repeated exposure to negative acceleration. ROBERT M. HERRICK, JEROME L. MYERS, AND RICHARD E. BURKE, *Aviation Medical Acceleration Laboratory, Naval Air Development Center, Johnsville, Pennsylvania*.

### SYMPOSIA

#### Theory and Research in Human Relations Training by Group Methods

WARREN G. BENNIS, Chairman

Discussants: JACK GIBB, WILLIAM SCHUTZ, KENNETH D. BENNE, LEO BERMAN, AND MATT MILES.

#### The Changes in the Ego and in the Cognitive Processes in Schizophrenia

GORDON F. DERNER, Chairman

Discussants: SILVANO ARIETI, GUSTAV BYCHOWSKI, ZYMUNT A. PIOTROWSKI, BENJAMIN B. WOLMAN, AND KURT GOLDSTEIN.

#### Sociopsychological Aspects of Diagnosis and Treatment: Theoretical Implications

ROBERT L. KAHN, Chairman

Discussants: DANIEL J. LEVINSON, HARVEY A. ROBINSON, STANLEY D. IMBER, AND MAX POLLACK.

### Psychology and Public Health

BERNARD MAUSNER, Chairman

Discussants: STANLEY H. KING, JACK ELINSON, AND DANIEL M. WILNER.

### INVITED ADDRESSES

Achievement Motivation and Economic Development by DAVID C. MCCLELLAND. FRANCIS IRWIN, Chairman, and WILLIAM C. H. PRENTICE, Discussant.

Similarities Between Hearing and Skin Sensations by GEORG VON BÉKÉSY. J. DONALD HARRIS, Chairman, and WALTER C. ROSENBLITH, Discussant.

Mathematical Solutions for Psychological Problems by HAROLD GULLIKSEN. GEORGE MILLER, Chairman, and HERBERT SOLOMON, Discussant.

### SPECIAL MEETINGS

Psi Chi. SHERMAN ROSS, Chairman.

Research by Psychologists in Medical Schools. ARTHUR WEIDER, Chairman, JOHN R. BARRY, NORMAN I. HARWAY, MURRAY E. JARVIK, AND HERMAN A. WITKIN.

Regional Meeting of the Conference of State Psychological Associations. Committee on Practicum Training. JOHN V. GILMORE, Chairman.

### DEMONSTRATION

An Apparatus for a Demonstration of Serial Learning or Chained Responding. J. GILMOUR SHERMAN, Chairman, and ROSEMARY PIERREL.

### FILM

Expressive Movements (Affectomotor Patterns) in Infancy. BELA MITTELMANN.

### PRESIDENTIAL ADDRESS AND ANNUAL BUSINESS MEETING

FRED S. KELLER, Chairman

STUART W. COOK. The Psychologist of the Future: Scientist, Professional, or Both?

PROCEEDINGS OF THE TWENTY-EIGHTH ANNUAL MEETING  
OF THE  
ROCKY MOUNTAIN PSYCHOLOGICAL ASSOCIATION

WILLIAM H. BROWN, Secretary

*University of Utah College of Medicine*

THE twenty-eighth Annual Meeting of the Rocky Mountain Psychological Association was held at the La Fonda Hotel in Santa Fe, New Mexico, on May 8, 9, and 10, 1958. Approximately 200 persons attended.

Calvin W. Taylor served as President for 1957-58. Anna Y. Martin succeeded him as President for 1958-59. Wilson J. Walthall, Jr. was elected President-elect for 1959-60. Henry C. Ellis was elected Treasurer for a three-year term.

Richard J. Triplett, Denver, Colorado, was elected to life membership in the association.

The meetings were enlivened many times over by the historic attractions of Santa Fe and by visits to Bandelier National Monument. A tour of Los Alamos and dinner at Bishop's Lodge, with the additional attraction of internationally famous Taos Indian Dancers, climaxed a grand convention.

The Annual Meeting for 1959 was tentatively set for Sun Valley, Idaho.

PROGRAM

ADDRESSES

The Future of Psychology. Invited Addresses by FILLMORE SANFORD, *University of Texas*.

Presidential Address by CALVIN W. TAYLOR, *University of Utah*, President of the Rocky Mountain Psychological Association.

Archeology of the North Rio Grande. Invited Address by EDMUND LADD, Bandelier National Monument Archeologist.

Colorado, WALTER EMMERICH, *University of Colorado*, LEWIS BERNSTEIN, *VA Hospital, Denver, Colorado*.

Research Findings and their Application to the Practice of Group Therapy

WILLIAM F. HILL, *Utah State Hospital, Provo, Utah*, Chairman

Participants: RICHARD A. LAKE, *State Hospital South, Blackfoot, Idaho*, and IDA S. HILL, *Utah State Hospital, Provo, Utah*.

Discussant: FRED DE WIT, *State Hospital South, Blackfoot, Idaho*.

SYMPOSIA

Statistical and Clinical Prediction

JOHN J. CONGER, *University of Colorado School of Medicine*, Chairman

Prediction of group behavior on the basis of group variables. BERNICE R. S. EISMAN, *University of Colorado*.

Statistical prediction of group trends. ROBERT HORNBERGER, *State University of Iowa*.

Clinical prediction of individuals. MARVIN W. KAHN, *University of Colorado School of Medicine*.

Statistical prediction of individuals. WILLIAM L. SAWREY, *University of Colorado School of Medicine*.

Trends in Developmental Psychology II

GLENN TERRELL, *University of Colorado Medical School*, Chairman

Participants: JOHN J. CONGER, *University of Colorado Medical School*, WALTER MISCHER, *University of*

PAPERS

Obesity in rats produced by chronic noxious stimulation. GRAHAM M. STERRITT, *University of Colorado Medical Center*.

Effects of food deprivation on manipulation and activity in cats. RAYMOND C. MILES, *Montana State College*.

The effect of amphetamine upon cats with lesions in the ventromedial hypothalamus. JOSEPH C. SHARP AND PAUL B. PORTER, *University of Utah*.

EEG responses to hallucinated lights. ROBERT A. LIPFOLD, *University of Utah*.

An investigation of the phase of alpha activity in relation to visual recognition. REED S. BOSWELL, *University of Utah*.



- Inconsistency as related to guidance readiness. OWEN L. CASKEY, *Colorado State University*.
- A revised two-factor theory of inhibition. MERRELL E. THOMPSON, *New Mexico College of Agriculture and Mechanic Arts*.
- Transfer of training in concept formation. R. BRIAN PENDLETON AND LYLE E. BOURNE, JR., *University of Utah*.
- A measure of perceptual defense uncontaminated by response suppression. ANNE MATHEWS AND MICHAEL WERTHEIMER, *University of Colorado*.
- The centrality of a perceived trait as a function of the strength of that trait in the perceiver. DAVID T. BENEDETTI AND JOSEPH HILL, *University of New Mexico*.
- Accuracy of time estimated as a function of task complexity. LELAND R. KAISER, ROGER DARNELL, AND MICHAEL WERTHEIMER, *University of Colorado*.
- The temporal course of verbal transfer. HENRY C. ELLIS, *University of New Mexico*.
- Clinical engineering. IJA N. KORNER AND WILLIAM H. BROWN, *University of Utah College of Medicine*.
- The prison psychologist: A study in adjustment. MANUEL N. BROWN, *Parole Board, Santa Fe, New Mexico*.
- Stratified vs. random assignment of students in psychology at the United States Air Force Academy. FRED E. HOLDREDGE, *United States Air Force Academy*.
- The influence of diet on handling effects in the rat. J. M. WHITEHOUSE, E. DIAMANT, H. ELRICK, AND L. BERNSTEIN, *VA Hospital, Denver, Colorado*.
- Radio pyrogenesis in animal activity and learning. DON R. JUSTESSEN AND R. BRIAN PENDLETON, *University of Utah*.
- Cortical and subcortical EEG changes induced by anti-convulsants. HAROLD C. NELSON AND DON R. JUSTESSEN, *University of Utah*.
- The inheritance of saccharine preference in rats. MARVIN NACHMAN, *University of Colorado*.
- The acquisition of conditioned responses at various levels of consciousness. E. C. BECK AND TATSUYA KANAI, *VA Hospital, Fort Douglas, Utah*.
- Subcortical conditioning: Stimulus generalization between the caudate nucleus and the centre median. PAUL B. PORTER AND HAROLD C. NELSON, *University of Utah*.
- The projective effects of experimentally aroused response tendencies on the rating of pictures. ROBERT H. HORNBERGER, *State University of Iowa*.
- Conformity as a function of some situational and individual variables. BERNICE EISMAN AND JOEL LEVY, *University of Colorado*.
- Methods and techniques of group procedure. RICHARD A. LAKE, *State Hospital South, Blackfoot, Idaho*.
- Szondi profiles of monzygotic and dizygotic twins. EDWARD G. NOLAN, *University of New Mexico*.
- An exploration of a performance test of personality. SEBASTIAN SANTOSTEFANO, *University of Colorado School of Medicine*.
- Comparison of WISC performance in "organic" and "nonorganic" acting-out and delinquent children. BONNIE WELL CAMP, *University of Colorado Medical School*.
- The Structure Doll Play Test as a projective technique. DAVID B. LYNN AND ROSALIE LYNN, *University of Colorado Medical Center and Denver General Hospital*.
- How well do speed and mileage account for traffic accidents? ROGER G. STEWART, *University of California*.
- On the comparative power of parametric and nonparametric techniques. WILLIAM L. SAWREY, *University of Colorado School of Medicine*.
- Variations in reported driving exposure vs. differences in driving records. ROGER G. STEWART, *University of California*.

PROCEEDINGS OF THE FIFTH ANNUAL MEETING  
OF THE  
SOUTHWESTERN PSYCHOLOGICAL ASSOCIATION

RUTH M. HUBBARD, Secretary

*Waco, Texas*

THE Southwestern Psychological Association held its fifth Annual Meeting in Austin, Texas, April 3-5, 1958. The society has about 450 members, predominantly from Arkansas, Kansas, Louisiana, Missouri, Oklahoma, and Texas; registered at this meeting were 222 persons, about four-fifths from Texas.

Special events included a Psi Chi luncheon and a luncheon meeting of VA staff, trainees, and consultants addressed by Robert Waldrop, Chief Counseling Psychologist, Veterans Administration Central Office. The program winning the greatest newspaper interest was the Presidential Address presented by Robert Blake,

entitled "Psychology and the Crisis of Statesmanship" wherein he applied understanding of group dynamics to current relationships between sovereign states.

New officers elected were: President, Wayne Holtzman, University of Texas; President-elect, Ruth M. Hubbard, Waco VA Hospital; Secretary for a two-year term, Beatrix Cobb, soon to join the faculty of Texas Technological College, Lubbock, Texas. The Treasurer, Joseph V. West, Baylor University, continues for the second year of his two-year term.

The sixth Annual Meeting of the society will be held April 16-18, 1959, in Topeka, Kansas.

PROGRAM

PAPER SESSIONS

Perception

HARL H. YOUNG, Chairman

Conditioning of perception with verbal reinforcement.

JOHN F. SANTOS AND CHARLES M. SOLLEY.

Cues of zero validity in discrimination learning. ROBERT E. MORIN.

The effects of overtraining on discrimination reversal learning after varying intervals of time. MORTON W. WEIR AND HAROLD W. STEVENSON.

The relation of expected utility to preference for a decision. ROBERT G. SMITH.

Learning I

ALVIN NORTH, Chairman

The effect of chlorpromazine on transfer mediated by fear produced stimulation. JACK CAPEHART, WILLIAM MARVIN DAVIS, AND IRENE HULICKA.

Concept learning in rhesus monkeys. W. LYNN BROWN AND JOHN E. OVERALL.

The effect of sustained novelty upon manipulation in rhesus monkeys. RICHARD M. CARR AND W. LYNN BROWN.

The implications of recency effects for probability learning theories. JOHN E. OVERALL AND W. LYNN BROWN.

Physiological

CHARLES SOLLEY, Chairman

Maze retention and brain calcium. RICHARD K. OVERTON.

Pituitary adrenal activity as a factor in avoidance conditioning. JOHN NICHOLS AND WILLIAM MARVIN DAVIS. (Sponsor, Irene Hulicka)

Feeding schedules as a factor in the etiology and prognosis of irradiation sickness. ROBERT K. WHITE AND W. LYNN BROWN.

The relation between pre-irradiation volitional activity and post-irradiation mortality order in the adult male rat. ARNOLD A. McDOWELL AND W. LYNN BROWN.

Industrial and Social

R. E. STOLTZ, Chairman

Job requirements for NIKE AJAX Battery Officers. WILLIAM F. BROWN, CHARLES L. DARBY, AND CHARLES D. SMITH.

On the nature and diagnosis of a social attitude, superior-subordinate orientation. F. L. DAMARIN AND D. T. CAMPBELL.

The psychological aspects of an industrial layoff. ROBERT V. HAMILTON.

**Learning II**

JOHN NICHOLS, Chairman

Instrumental and competing behavior as a function of trials and reward magnitude. A. C. PEREBOOM AND B. M. CRAWFORD.

Learning of sequential reward patterns by albino rats. JAMES WICKER, JOHN E. OVERALL, AND W. LYNN BROWN.

Studies in rote learning. THERON G. LANSFORD. (Sponsor, Karl M. Dallenbach)

The role of repetition in the learning of paired associates. LESTER L. CLARK. (Sponsor, Karl M. Dallenbach)

**Clinical I**

IRWIN A. BERG, Chairman

A measure of alienation. GWYNN NETTLER.

The modification of theory: With special reference to psychoanalytic ego psychology. ALAN A. FRANKEL.

The self concept in the criminal. PHILIP WORCHEL AND JOSEPH HILLSON.

Areas of concept formation in the mentally retarded. DONALD GILLER AND IRA ISCOE.

**Selection and Assessment**

JOHN GEERS, Chairman

Sex differences in scholastic behavior and a priori subscales for the SSHA. WILLIAM F. BROWN.

The development of items to differentiate between delinquent and nondelinquent subjects. BOB H. SMITH.

A study in validating a brief verbal test of intelligence. WILLIAM H. MELCHING AND ROBERT R. BARRETT.

Personality correlates of intraclass instructional grouping of teachers. BEEMAN PHILLIPS.

Studies involving the analysis of correlations between experimentally-dependent variables. BENJAMIN FRUCHTER.

**Learning III**

W. LYNN BROWN, Chairman

Obliviscence during waking and self-hypnosis. JOSEPH V. WEST.

The psychology of learning: Help wanted! IRENE HULICKA.

**Clinical II**

HENRY D. REMPLE, Chairman

Perceptual continuity in schizophrenics, mentally retarded, and normals. IRA ISCOE.

A study of the effect of support and nonsupport on the performance of normal and feeble-minded children. HAROLD STEVENSON, LAUREL HODGDEN, AND EDWARD ZIGLER.

Experience of clinicians and speech characteristics and statements of clients as variables in clinical judgment. AUSTIN E. GRIGG.

Body image and asymmetry of body reactivity. SEYMOUR FISHER.

Body image boundaries in the neuroses and psychoses. SIDNEY CLEVELAND AND SEYMOUR FISHER.

**Projective Techniques**

HAROLD M. CHAPMAN, Chairman

The meaning of Rorschach white space responses. JOSEPH B. RAY.

Facade orientation and academic achievement. WILLIAM F. BROWN.

Stimulus ambiguity studies with the TAT. BERNARD I. MURSTEIN.

The effects of socioeconomic, sex, age, and stimulus factors on responses to the Rosenzweig Picture Frustration Test. MARSHALL SMITH AND R. E. STOLTZ.

**SYMPOSIA****Working with Children with Problems and Their Families**

BEATRIX COBB, Chairman

BEATRIX COBB. Emotional problems of the chronically ill child and his parents.

ROBERT MACGREGOR AND HAROLD GOOLISHIAN. Multiple impact therapy for families of adolescents who have psychiatric problems.

W. K. BOARDMAN. Houston Child Study Clinic: A developing program.

GENETTE BURRUSS. A follow-up study of eight schizophrenic children for whom psychotherapy was not available.

CARL HEREFORD. Community economics and child guidance.

**Frontiers in Clinical Psychology**

IRA ISCOE, Chairman

WAYNE HOLTZMAN. Quantification of projective techniques.

LOUIS MORAN. Repetitive measurements of psychological functions.

ROY MEFFERD. Biochemical measurements and psychological functioning.

LAURENCE S. MCGAUGHRAN. Research trends in the area of conceptualization.  
SEYMOUR FISHER. The body image approach to behavior.

### **The Expanding Role of the Psychologist in Psychiatry**

MAX LEACH, Chairman

Participants: GLADYS BROWN, DICK GIESSE, AND OLIVER H. BOWN.

### **Creativity**

ROBERT PECK, Chairman

ROBERT PECK. Motivational bases for creativity.  
CARSON MCGUIRE. Dimensions of creativity.  
RALPH DUKE. Developing creativity.  
JOHN PIERCE-JONES. What is creativity?

### **Case Studies of Stress Management**

JOSEPH U. YARBOROUGH, Chairman

### **SPECIAL MEETINGS**

Committee on State Associations Meetings. S. J. FIELDS, Chairman. Address by FILLMORE SANFORD: State Associations and the American Psychological Association.

Psi Chi Luncheon.

Discussion: Psychologists in Medical Schools. S. J. FIELDS, Chairman.

Texas Psychological Association Executive Committee Meeting. SYLVAN J. KAPLAN, President.

### **PRESIDENTIAL ADDRESS**

ROBERT R. BLAKE. Psychology and the Crisis of Statesmanship.

### **PROGRAM**



# PROCEEDINGS OF THE FOURTH ANNUAL MEETING OF THE SOUTHEASTERN PSYCHOLOGICAL ASSOCIATION

M. C. LANGHORNE, Secretary-Treasurer

*Emory University*

THE Southeastern Psychological Association held its fourth Annual Meeting April 27-29, 1958, Atlanta, Georgia, with 371 persons registering. Emory University was the host institution. The program consisted of 7 symposia, 56 papers, 10 films, and 3 special preconvention meetings.

The Presidential Address, "Excursion into Politics," was presented by Edward E. Cureton of the University of Tennessee. The address was followed by the Annual Business Meeting.

The Program Committee consisted of Albert K. Kurtz, Chairman, Morton A. Bertin, Ann S. McColskey, and Stanley E. Wimberly. Local arrangements were handled efficiently by Edward H. Loveland, Chairman, who was assisted by Oscar S. Adams, Paul I. Clifford, Junius A. Davis, Miriam Koontz Drucker, Richard A. Goodling, Richard Moll, and Carr Payne, Jr. The Election Committee was composed of Nicholas Hobbs, Chairman, Stanford C. Ericksen, and S. O. Roberts. The Auditing Committee consisted of Richard A. Goodling, Chairman, Eugene Dutton, and Hermon W. Martin. Junius A. Davis and Morton Rabin were in charge of Placement Services.

Officers for 1958-59 are W. N. Kellogg, President; M. C. Langhorne, President-elect; Susan W. Gray, Secretary-Treasurer (1958-61); E. E. Cureton, Immediate Past President. Members-at-large on the Executive Committee are Dorothy C. Adkins (1956-59), Eliot H. Rodnick (1957-60), and Richard W. Husband (1958-61).

The report of the Secretary included the following items:

1. A report that the members of the association had voted overwhelmingly in favor of three amendments to the Constitution put to them by mail ballot.

2. A statement that the members had voted by mail to hold the fifth Annual Meeting on Thursday, Friday, and Saturday, April 23-25, 1959, Ponce de Leon Hotel, St. Augustine, Florida. This will be a joint meeting with the Florida Psychological Association.

3. That James S. Calvin had been the official representative of SEPA at the inauguration of Irvin E. Lunger as President of Transylvania College.

4. An announcement that an active recruitment campaign, consisting of letters to all departmental chairmen in the region whose departments offered graduate work in psychology urging them to invite their graduate students to become Student Affiliate members, and mailing printed programs with enclosed membership invitations to all APA members in the region had brought in an encouragingly large number of both categories of members. New members for 1957-58 were:

## FULL MEMBERS

Eddie Neely Anderson	D. R. Kenshalo
Robert S. Beecroft	Neil D. Kent
Bartley E. Bess, Jr.	Mary L. King
Fred Y. Billingslea	Adolph M. Koch
Raymond P. G. Bowman	Margaret Barron Luszki
Roscoe A. Boyer	Gerda P. McCahan
Marie Robin Burguières	Noble H. McEwen
Bristow	W. E. Meaders, Jr.
Earl C. Brown	Thomas Meadows
Luis F. Bueno	Minnie C. Miles
Willard E. Caldwell	Ray S. Musgrave
Gordon N. Cantor	John P. Nafe
Joan H. Cantor	Walter G. Nelson
Claire Chaloron	Slater E. Newman
W. J. Clark	Raymond C. Norris
Walter V. Clarke	Dempsey F. Pennington, Jr.
Cooper C. Clements	Wallace W. Prophet
Carroll M. Colgan	Sherman C. Raffel
Mary J. Collier	Aubrey H. Rone
Rue L. Cromwell	Blanche Rousseau-Evans
Gerd M. Cryns	Frederick W. Rowe
Paddy Ann Doll	Joseph F. Rychlak
Eugene Dutton	Paul T. Sayers
Mary I. Duwall	Audrey S. Schumacher
Robert E. Ehrlich	Irma Lee Shepherd
Eugene Engen	James C. Smith
Edmond F. Erwin	Roy E. Sommerfeld
Joen Fagan	Herbert Sorenson
Florence S. Farley	Charles D. Spielberg
Walter J. Fightmaster	Robert O. Stripling
Warren G. Findley	Hans H. Strupp
Raymond D. Fowler	Sam M. Thornton
Henry E. Garrett	Nicholas M. Vincent
Norman Guttman	Alex Waite
C. E. Izard	Jane M. Whitehurst
Marion F. Jurko	Robert E. Williams
Gale G. Keith	Ulrey K. Wilson
John D. Kelton	Stanley E. Wimberly

## AFFILIATE MEMBER

Margaret T. Aldridge

## STUDENT AFFILIATE MEMBERS

Henry E. Adams  
Wayne T. Alcock  
Harry R. Barker  
Roger W. Black  
Jerry N. Boone  
Paul W. Caro  
Richard N. Carrera  
Victor J. Cieutat  
Walter F. Daves  
Michael Dinoff

Walter R. Duryea  
Monroe P. Friedman  
Roland L. Frye, Jr.  
Donald R. Gannon  
Ronald S. Lindner  
Barbara Mock Maier  
Warren J. Presley  
Faye Pritchard  
Walter G. Reed  
Charles M. Robinson

Hix P. Slagle, Jr.  
Ronald J. Schusterman

Daniel L. Stix  
Alfred J. Turner

The report of the Treasurer listed receipts of \$1,883.65, expenditures of \$846.37; balance of \$1037.28.

Dues for 1958-59 were set at \$2.00 for Members and Affiliate Members, and \$1.00 for Student Affiliate Members.

A resolution expressing appreciation to the officers, committee members, hotels, institutions, and agencies contributing their time and energies in making the fourth Annual Meeting a success was adopted by a rising vote.

## PROGRAM

## SPECIAL PROFESSIONAL EVENTS

Meeting of officers of state psychological associations in the region sponsored by the Conference of State Psychological Associations and the APA Board of Professional Affairs.

Meeting of chairmen of psychology departments in the region offering undergraduate programs in psychology sponsored by Southern Regional Education Board.

Joint meeting of the above mentioned chairmen and chairmen of graduate departments of psychology sponsored by Southern Regional Education Board.

## SYMPOSIA

## Modern Psychology in Education and Guidance Research

JUNIUS A. DAVIS, *Regents of the University System of Georgia*, Chairman

Participants: HENRY WEITZ, *Duke University*, SAM C. WEBB, *Emory University*, JOSHUA A. FISHMAN, *College Entrance Examination Board*, AND JUNIUS A. DAVIS, *Regents of the University System of Georgia*.

## Treatment of Individuals with Unusual Problems

RALPH M. DREGER, *Jacksonville University*, Chairman

Electra and Oedipus in the playroom. HAIM G. GINOTT, *Duval County Child Guidance and Speech Correction Clinic*.

An apple for teacher. JUSTIN E. HARLOW, JR., *University of Florida*.

The Negro child and white therapist in individual and group psychotherapy. ARTHUR R. ORGEL, *USAF, Keesler Field*.

## The Role of a Psychologist in Working with the Disabled

GRACE M. FREYMAN, *Warm Springs Foundation*, Chairman

Participants: MARY L. ANDERSON, *Warm Springs Foundation*, ROBERT L. BENNETT, *Warm Springs Foundation*, A. P. JARRELL, *Georgia Rehabilitation Program*, AND MAMIE J. JONES, *State of Georgia Special Education Program*.

## Medical Psychology in the South

ARTHUR J. BACHRACH, *University of Virginia*, Chairman

Participants: ROBERT ALLEN, *University of Miami*, LOUIS D. COHEN, *Duke University*, EDMOND ERWIN, *University of Louisville*, THEODORE MAY, *University of Tennessee*, BOYD SISSON, *Medical College of Georgia*, AND HANS STRUPP, *University of North Carolina*.

## A Rapprochement between Experimental and Clinical Psychology

MALCOLM H. ROBERTSON, *University of Mississippi*, Chairman

Participants: MALCOLM D. ARNOULT, *University of Mississippi*, IRWIN A. BERG, *Louisiana State University*, STANFORD C. ERICKSEN, *Vanderbilt University*, AND GERALD R. PASCAL, *University of Tennessee*.

## How Shall We Train School Psychologists?

SUSAN W. GRAY, *George Peabody College of Teachers*, Chairman

WALTER D. SMITH, *Florida State University*, Moderator

The school psychologist's role as the psychologist sees it. PAUL PENNINGROTH, *Southern Regional Education Board*.

The school psychologist's role as the educator sees it.

TRUMAN PIERCE, *Alabama Polytechnic Institute*.

Training the school psychologist for his expanded role.

RAYMOND NORRIS, *George Peabody College for Teachers*.

### A Mental Health Program in Atlanta Public Schools

FAIN A. GUTHRIE, *Atlanta Board of Education*,  
Chairman

Participants: AURELIA DAVIS, *Atlanta Board of Education*, IRMA L. SHEPHERD, *Atlanta Board of Education*, MELVIN DRUCKER, *Fulton County Child Guidance Clinic*, AND JAMES L. GREENE, SR., *University of Georgia*.

## PAPER SESSIONS

### Animal Learning

WILLIAM BEVAN, JR., *Emory University*, Chairman

Retention for object discrimination in the rhesus monkey. PASCHAL N. STRONG, JR., *VA Hospital, Durham, North Carolina*.

Social conditioning in rats. W. T. JAMES, W. F. ANGERMEIER, AND LEWIS SCHAUL, *University of Georgia*.

The acquisition and extinction of runway performance by placement trials. F. T. CRAWFORD, *Georgia State College, Atlanta*.

A technique for obtaining a reliable response to a light stimulus by conditioning the limulus. JAMES C. SMITH, *Florida State University*.

### Clinical Tests and Diagnostic Techniques

CECIL K. HARBIN, *VA Mental Hygiene Clinic, Atlanta*,  
Chairman

The influence of manifest anxiety on college grades.

CHARLES D. SPIELBERGER AND WILLIAM G. KATZENMEYER, *Duke University*.

The learning of hostile and nurturant content in relation to degree of TAT hostility. OSCAR A. PARSONS AND BARBARA B. CHAPMAN, *Duke University*.

An unsuccessful attempt to develop a human figure drawing scale as a psychiatric screening adjunct. MORTON J. ARONSON, PAUL T. SAYERS, AND GEORGE N. RAINES, *Psychiatric Unit of Marine Corps*.

The psychasthenic and hypomanic scales of the MMPI and uncertainty in judgments. ALBERT V. GRIFFITH, HARRY S. UPSHAW, AND RAYMOND D. FOWLER, *University of Alabama*.

### Pathological Disorders

GERALD R. PASCAL, *University of Tennessee*, Chairman

Perceptions of self and of normality in schizophrenics. JOEN FAGAN AND GEORGE M. GUTHRIE, *VA Regional Office, Atlanta and Pennsylvania State University*.

A clinical analysis of the psychophysiological responses of mental patients. LUTHER L. MAYS AND PETER W. KYRIAZIS, *VA Hospital, Washington, D. C.*

On the behavioral definition of alcoholism. H. C. DAVIS, *University of Tennessee*.

An abstract of a study of alcoholic types. CLIFFORD H. SWENSON, JR. AND HUGH C. DAVIS, JR., *University of Tennessee*.

### Verbal Conditioning

W. G. WORKMAN, *Davidson College*, Chairman

Muscle action potentials during verbal conditioning. NEIL D. KENT, *Louisiana State University*.

The effect of verbal conditioning on related nonverbal behavior. EDWIN O. TIMMONS, *University of Tennessee*.

The effect of familiarization on paired-associate verbal learning. RONALD R. GANNON AND CLYDE E. NOBLE, *Louisiana State University and Montana State University*.

The interactions of ability, practice, and stimulus and response meaningfulness in paired-associate syllable learning. VICTOR J. CIEUTAT AND CLYDE E. NOBLE, *Louisiana State University and Montana State University*.

### Mathematical and Psychometric

JAMES S. CALVIN, *University of Kentucky*, Chairman

Reliability and the amount of information presented. WILSE B. WEBB AND MARVIN SCHWARTZ, *US Naval School of Aviation Medicine, Pensacola*.

A note on Bertrand's problem. OLIVER L. LACEY, *University of Alabama*.

AVA as a predictor of occupational hierarchy. PETER F. MERENDA AND WALTER V. CLARKE, *Walter V. Clarke Associates, Inc.*

The failure to assert the null hypothesis and statistical inferences about psychological literature. THEODOR D. STERLING, *Michigan State University*.

### Educational

RICHARD W. HUSBAND, *Florida State University*,  
Chairman

A comparison of the "school morale" of white and Negro students in a large Southeastern school system. JAMES E. GREENE, SR., *University of Georgia*.

Reading skill as a predictor of academic achievement.

MALCOLM H. ROBERTSON, *University of Mississippi*.

The prediction of academic performance in a graduate school in industrial administration. HOWARD G. MILLER, *North Carolina State College*.

Graphic methods in the presentation of group comparisons of school achievement. WARREN G. FINDLEY, *Board of Education of Atlanta*.

### Interpersonal Personality Traits

JOHN M. MCKEE, *Alabama State Department of Health*, Chairman

Measures of conformity as found in the Rosenzweig P-F study and the Edwards Personal Preference Schedule. GEORGE N. GRAINE, *Alfred University*.

Dominance as a factor in interpersonal choice and perception. JOHN ALTROCCHI, *Duke University*.

Self-evaluation and performance level in a competitive social context. JOSEPH F. RYCHLAK, *Florida State University*.

Misperceptions of facial characteristics as a function of verbally induced personality impressions. THOMAS M. STRITCH, PAUL F. SECORD, AND LINDA JOHNSON, *East Carolina College*, *University of Nevada*, and *Mary Washington College*.

### Learning Theory

PAUL S. SIEGEL, *University of Alabama*, Chairman

Vicarious experience and partial reinforcement. DONALD J. LEWIS AND CARL P. DUNCAN, *Louisiana State University* and *Northwestern University*.

An examination of Mowrer's sign-learning interpretation of anxiety. WATERS C. PAUL AND PAUL S. SIEGAL, *Bryce Hospital*, *Tuscaloosa, Alabama* and *University of Alabama*.

Learning of a probable-cue judgment. JAMES CALVIN AND MARY E. CURTIN, *University of Kentucky*.

More on learning without performance. JOHN B. WOLFE, *University of Mississippi*.

### General Clinical

M. KERSHAW WALSH, *University of South Carolina*, Chairman

The effect of "threat" words on verbal functioning. CARROLL E. IZARD AND JERRY N. BOONE, *Vanderbilt University*.

Attitudes of mothers of schizophrenic patients. IRMA L. SHEPHERD AND GEORGE M. GUTHRIE, *Atlanta Board of Education* and *Pennsylvania State University*.

The universal validity and personal validation of personality descriptions. E. G. PATTISHALL AND A. J. BACHRACH, *University of Virginia*.

A multidimensional approach to the study of clinical judgment. JOHN W. DONAHOE, *University of Kentucky*.

### Factors Affecting Animal Behavior

GILBERT W. MEIER, *Vanderbilt University*, Chairman

The role of vision in animal spatial orientation. JOHN F. DASHIELL, *University of North Carolina*.

Measurement of aggressiveness in male mice. GIRARD W. LEVY, *Georgia State College, Atlanta*.

The comparative effect of reserpine on an avoidance habit and general motor activity. DEMPSEY PENNINGTON AND PAUL S. SIEGEL, *University of Alabama*.

The effect of ECS on retention of a discrimination habit in brain damaged rats. DEMPSEY PENNINGTON AND ROBERT THOMPSON, *University of Alabama* and *Southeast Louisiana*.

### Projective Techniques

JOSEPH G. DAWSON, JR., *Southeast Louisiana Hospital*, Chairman

Psychopathology and social adequacy: A Rorschach development study. RAYMOND D. FOWLER, *University of Alabama*.

A coercion compass evaluation of Rorschach determinants in brain damaged individuals. ANN LODGE AND OSCAR A. PARSONS, *Duke University*.

The effect of formal art training upon the quantitative scores of the H-T-P. VYTAUTAS J. BIELIAUSKAS AND ROBIN B. BRISTOW, *Richmond Professional Institute* and *Richmond Public Schools*.

Differences in performance on chromatic vs. achromatic H-T-P drawings. VYTAUTAS J. BIELIAUSKAS AND ANN R. HEFFRON, *Richmond Professional Institute* and *Tulane Medical School*.

### Applied Experimental

OSCAR S. ADAMS, *Lockheed Aircraft Corporation*, Chairman

Changes in several operant dimensions with respect to time and each other. THOMAS F. GILBERT, *University of Georgia*.

A method for verifying monaural deafness. FRANK KODMAN, JR., *University of Kentucky*.

Relation of manifest anxiety and experimental stress to word recognition thresholds. JOHN A. HAMMES, *University of Georgia*.

The reproduction of short time intervals. C. J. ADKINS, JR., *High Point College*.



## Genetic

RUE L. CROMWELL, *George Peabody College for Teachers*, Chairman

An experimental investigation of parent-child attitudes with the Pari scale. WALLY REICHENBERG-HACKETT AND DONALD K. FREEDHEIM, *Duke University*.

The relation of certain sociological, medical, and psychological factors to the mother's joy or indifference the first time she sees her baby. NILES NEWTON AND MICHAEL NEWTON, *University of Mississippi School of Medicine*.

Reactions of superior and feeble-minded children to an illusion. J. C. DIXON, *University of Florida*.

Experimental determination of the degree of development of social empathy. HANS HAHN, *Transylvania College*.

## General

WILLIAM M. HINTON, *Washington and Lee University*, Chairman

The decision process: Monadic and dyadic conflict resolution. JOHN M. ATTHOWE, JR., *Emory University*.

The structural basis of familiarity. MALCOLM D. ARNOULT, *University of Mississippi*.

The effects of specificity of instructions on discrimination reaction time. WAYNE T. ALCOCK, ROLAND L. FRYE, JR., AND CLYDE E. NOBLE, *Louisiana State University*.

Olfactory and gustatory thresholds as a function of hunger. ERNEST FURCHTGOTT AND M. P. FRIEDMAN, *University of Tennessee*.

# PROCEEDINGS OF THE FIFTIETH ANNUAL MEETING OF THE SOUTHERN SOCIETY FOR PHILOSOPHY AND PSYCHOLOGY

WILSE B. WEBB, Secretary

*University of Florida*

SOME three hundred members of the Southern Society for Philosophy and Psychology attended the semicentennial meeting which honored the Past Presidents of the society. The SSPP was founded in 1904 by Mark Baldwin. This, however, was the fiftieth meeting as four meetings were suspended during World War I and World War II. The meeting was held April 3-5, 1958.

The hosts of this meeting were the Departments of Philosophy and Psychology at Vanderbilt University. John J. Compton, Stanford Ericksen, and Gilbert W. Meier were in charge of local arrangements. Marion E. Bunch and William Weedon constituted a special committee for the semicentennial program. The members of the general program committee were: John Paul Nafe, Florida State University, Honorary Chairman; Lewis E. Hahn and James M. Vanderplas, Washington University, Co-Chairmen; Willis Moore, Southern Illinois University; and Carl Sherrick, Washington University.

At the annual business meeting, in addition to the receipt of committee reports and conduct of society business, the following psychologists and philosophers were elected to membership in the society:

## FULL MEMBERSHIP

George E. Barton	Richard F. Martin
Jose A. Benardete	Richard K. Morton
John W. Davis	William F. Quillian, Jr.
Eugene Dutton	Mary C. Rose
James Gould	Helen B. Savage
Jackson L. Ice	Leo Simons
Walter Isaac	Dwight Van de Vate, Jr.
Marshall B. Jones	Neil L. Wilson

## ASSOCIATE MEMBERSHIP

Bernard H. Baumrin	Stanley G. French
Isaac Behar	Howard W. Gillen

The following officers of the society were elected:

Lewis E. Hahn, President  
Edgar Henderson, Treasurer  
William Bevan, Member of Council for Psychology  
Merritt Moore, Member of Council for Philosophy  
Wilse B. Webb, Rubin Gotesky, Everett Hall, William Hinton, and Rolland Waters will continue to serve on

the Council. John F. Dashiell and Max F. Meyer joined John Paul Nafe as Honorary Life members of the society. Anna Forbes Liddell and Marjorie S. Harris were also so designated from philosophy.

A memorial was read for the late Albert Balz. A resolution reading as follows was unanimously passed to be forwarded to the American Association for the Advancement of Science, the National Science Foundation, and various key legislative committees:

If financial aid from the Federal Government becomes available to support the advanced educational achievement of individuals, it is the firm and strong belief of the Southern Society for Philosophy and Psychology that such aid should be distributed on the basis of merit without restriction as to field of study. Our Society has just celebrated its Golden Anniversary and the accumulated experience of our first 50 years confirms the principle that the intellectual disciplines, Philosophy, the Humanities, the Arts, the Physical Sciences, and the Social Sciences cannot move forward independent of one another. We believe it would be extremely short-sighted and precarious to use differential financial attractions among these disciplines to distort the general advance of human knowledge.

At a banquet held on the Vanderbilt campus, the Past Presidents of SSPP were honored. Twenty of the 22 were able to accept the invitation of the society to attend this banquet. Those present gave brief comments in response to an introduction by the President of the society, Richard Henneman. Programs listing the Presidents and the titles of their addresses were distributed at the banquet. These names and titles were as follows:

J. Mark Baldwin, 1904-07	Sketch of the History of Psychology (1904)
	The Present State of Logical Theory (1907)
J. McBride Sterrett, 1908	The Proper Affiliation of Psychology
Albert Lefevre, 1909	The Growth of the Concept of Evolution Among the Greeks
Edward F. Buchner, 1910	Learning and Forgetting
Shepherd I. Franz, 1911	New Phrenology
Robert M. Goden, 1912	The Relation of Psychology to Philosophy and Education
H. J. Pearce, 1913	The Limitations of Knowledge
John B. Watson, 1914	(Title of address not available)

- |                           |   |                                    |   |
|---------------------------|---|------------------------------------|---|
| J. C. Barnes, 1915        | Academic Progress of Psychology in the South  | Fritz Marti, 1942                  | The College, Religion, and Philosophy             |
| David Spence Hill, 1916   | Education for Democracy   | Christian Paul Heinlein, 1943-1946 | Lest We Forget!                                   |
| E. K. Strong, 1917-1919   | (Title of address not available)  | Peter A. Carmichael, 1947          | The Limits of Method                              |
| Knight Dunlap, 1920       | The Social Need for Scientific Psychology   | B. von Haller Gilmer, 1948         | Evaluating the Criteria for Higher Education      |
| John M. Fletcher, 1921    | Geneticism As A Heuristic Principle in Psychology   | Harold N. Lee, 1949                | Theoretic Knowledge and Hypothesis                |
| Joseph Peterson, 1922     | Intelligence and Learning   | Elizabeth Duffy, 1950              | The Concept of Energy Mobilization                |
| Herbert C. Sanborn, 1923  | Aesthetics and Civilization   | Lewis M. Hammond, 1951             | Learning and Self-Government                      |
| Buford Johnson, 1924      | (Title of address not available)  | John B. Wolfe, 1952                | Psychology's Growth and the Southern Society      |
| John F. Dashiell, 1925    | Is the Cerebrum the Seat of Thinking?   | Willis Moore, 1953                 | Causal Factors in the Current Attack on Education |
| James Burt Miner, 1926    | The Significance of Qualitative Differences for Psychology                                  | Karl M. Dallenbach, 1954           | Phrenology versus Psychoanalysis                  |
| A. S. Edwards, 1927       | Intelligence as the Capacity for Variability or Versatility of Response                     | Charles A. Baylis, 1955            | Our Knowledge of Values                           |
| Josiah Morse, 1928        | (Title of address not available)  | Marion E. Bunch, 1956              | The Concept of Motivation                         |
| L. R. Giessler, 1929      | The Objectives of Objective Psychology  | William S. Weedon, 1957            | Socratic Logic                                    |
| Max F. Meyer, 1930        | Antievolution, Then Antisocial Science, and What Next? "The Folks say: Damn the Pedagogues" |                                    |   |
| Ethel Bowman, 1931        | (Title of address not available)  |                                    |   |
| H. M. Johnson, 1932       | Some Follies of Emancipated Psychology  |                                    |   |
| Anna Forbes Liddell, 1933 | Instructed Ignorance: The Philosophy of Nicholas Cusa                                       |                                    |   |
| Roy M. Dorcus, 1934       | Research in Psychology in Colleges  |                                    |   |
| John E. Winter, 1935      | The Postulates of Psychology  |                                    |   |
| Albert G. A. Balz, 1936   | The Metaphysical Infidelities of Modern Psychology  |                                    |   |
| Lyle H. Lanier, 1937      | The Description Categories of Psychology  |                                    |   |
| Marten ten Hoor, 1938     | The Philistines over Philosophy   |                                    |   |
| Frank A. Geldard, 1939    | "Explanatory Principles" in Psychology  |                                    |   |
| Marjorie S. Harris, 1940  | Mathematical Logic and Aesthetics   |                                    |   |
| John Paul Nafe, 1941      | The Quantification of Psychology  |                                    |   |

At the annual joint paper session the topic discussed was "The Control of Human Behavior" with the key papers by Rolland H. Waters, University of Florida, and by Henry N. Wieman, Southern Illinois University. The papers were followed by a discussion from the floor.

The Presidential Address of Richard H. Henneman, University of Virginia, was titled "Dilemmas Confronting Contemporary Psychologists."

The papers presented by Warren Willingham, United States Naval School of Aviation Medicine, "A Study of Performance Decrement Following Failure," and by Joseph Margolis, University of South Carolina, "On Justifying the Principle of Equality," were designated the special award papers which are annually selected from those given by members of the society who have not received a PhD or who have received their degrees within the last five years.

A good time was had by all.

## PROGRAM

### PAPER SESSIONS

#### Epistemology

WILLIS MOORE, *Southern Illinois University*, Chairman

Plato's *Sophist*. JASON XENAKIS, *Louisiana State University*.

Oxford philosophy and the mind-body problem. JAMES A. GOULD, *Emory University*.

Concerning two arguments against meaning as correspondence. PANAYOT BUTCHVAROV, *University of South Carolina*.

On concepts. PAUL G. MORRISON, *Tulane University*.  
The analytic and synthetic. GEORGE L. PROCTOR, *Virginia Military Institute*.

#### Aesthetics and Philosophy of Religion

MARTEN TEN HOOR, *University of Alabama*, Chairman

Art and the art-institution. RUBIN GOTESKY, *University of Georgia*.

Varieties of the pleasure-pain complex in aesthetic theory. HELEN BARNES SAVAGE, *Stephen F. Austin State College*.

The concept of sentimentality. LEO SIMONS, *University of Tennessee*.

The uses of reason in religion according to David Hume. N. P. JACOBSON, *Winthrop College*.

Karl Heim: Penetheism and the space of God. ROBERT WHITTEMORE, *Tulane University*.

### Logic and Philosophy of Science

CHARLES A. BAYLIS, *Duke University*, Chairman

Understanding science. JOHN J. COMPTON, *Vanderbilt University*.

A formalization of the relation between theory and experiment. JOHN OLIVER COOK, *North Carolina State College*.

Definition revisited. STANLEY G. FRENCH, *University of Virginia*.

The empirical and transcendental ego. MAURICE NATANSON, *University of North Carolina*.

Recent views of the theory of evolution. HERBERT C. SANBORN, *Vanderbilt University*.

### History of Philosophy

LEROY E. LOEMAKER, *Emory University*, Chairman

Kant, Freud, and Hull on the experience of guilt and freedom. JOHN R. SILBER, *University of Texas*.

The analytical movement and reconstruction in philosophy. PAUL E. PFUETZE, *University of Georgia*.

Wittgenstein, Ryle, and internal experience. PHILIP P. HALLIE, *Vanderbilt University*.

Fritz Medicus, 1876-1956. FRITZ MARTI, *Marti School*.

Clarity and distinction in modern philosophy. JOHN E. BAGALAY, JR., *University of Texas*.

Locke's color problem: *Essay*, II, 32, 15. JOSE A. BENARDETE, *University of Alabama*.

Mystical intuition in Descartes. J. B. MCMINN, *New Orleans Baptist Theological Seminary*.

### Ethics and Value Theory

HAROLD N. LEE, *Tulane University*, Chairman

Ethics and the suppression of desire. QUINTER M. LYON, *University of Mississippi*.

On justifying the principle of equality. JOSEPH MARGOLIS, *University of South Carolina*.

Values and scientific object. THEODORE T. LAFFERTY, *University of South Carolina*.

The nature of desires. E. M. ADAMS, *University of North Carolina*.

The Hobbesian heritage. BERNARD H. BAUMRIN, *Johns Hopkins University*.

Kant and the categorical imperative. ROBERT W. HALL, *University of Vermont*.

Suggested foundations of ethical theory. JACKSON LEE ICE, *Florida State University*.

### Perception

MALCOLM D. ARNOULT, *University of Mississippi*, Chairman

Perceptual factors in the absolute judgment of duration. ISAAC BEHAR AND WILLIAM BEVAN, *Emory University*.

Whiteout: A phenomena and bibliographical survey. GEORGE S. HARKER, *United States Army Medical Research Laboratory*.

Spatial linearity and oddity performance of monkeys. ARTHUR J. RIOPELLE, *United States Army Medical Research Laboratory*.

Localization of sounds in depth. JOHN L. FLETCHER, *United States Army Medical Research Laboratory*.

Discrimination learning and interdimensional transfer under conditions of systematically controlled visual experience. KENNETH M. MICHELS, WILLIAM BEVAN, AND HAROLD C. STRASSEL, *Purdue University and Emory University*.

A retention factor in complex tasks. KENNETH E. LLOYD AND RICHARD H. HENNEMAN, *University of Virginia*.

### Applied Psychology

ROBERT C. WINGFIELD, *Converse College*, Chairman

Recent trends in industrial psychology. B. VON HALLER GILMER, *Carnegie Institute of Technology*.

Overachievement-underachievement and prediction. GEORGE D. MAYO, *Naval Air Technical Command*.

A comparison of the "disciplinary status" of white and Negro high school students in a large southeastern school system. JAMES E. GREENE, SR., *University of Georgia*.

A test of some assumptions of the Grace Arthur Stencil Design Test. WINIFRED K. MAGDSICK, *Washington University*.

Continuing research on evaluation of some criteria in the education, guidance, and treatment of the mentally retarded. CHARLES P. POOLE, *Central Michigan College*.

### Theoretical Psychology I

M. C. LANGHORNE, *Emory University*, Chairman

An experimental contribution to the nativism-empiricism controversy. JOHN F. DASHIELL, *University of North Carolina*.

The quantitative study of esthetics. MALCOLM D. ARNOULT, *University of Mississippi*.

A dyadic model for the measurement of interpersonal influence. JOHN M. ATTHOWE, JR., *Emory University*.

Multivariate correlational analysis in learning research. PHILIP H. DUBOIS, *Washington University*.



Reduction of alpha in cortical rhythms as conditioning.  
E. P. HORNE, *University of Florida*.

### Theoretical Psychology II

SAMUEL S. KOMORITA, *Vanderbilt University*, Chairman

The stimulus and what they are. THOMAS F. GILBERT, *University of Georgia*.

The place of value in a world of space. WILSE B. WEBB, *United States Naval School of Aviation Medicine*.

What is the role of "ESP" in objective testing at the college level? JULIA H. HEINLEIN AND CHRISTIAN P. HEINLEIN, *University of North Carolina*.

The problem of mind and the principle of parity. WILL A. JUSTISS, *Moosehaven Research Laboratory*.

### Learning

GEORGE E. PASSEY, *University of Alabama*, Chairman

Differences between strains of rats in avoidance conditioning without an explicit warning stimulus. VERNON H. SCHAEFER, *United States Army Medical Research Laboratory*.

A study of performance decrement following failure. WARREN W. WILLINGHAM, *United States Naval School of Aviation Medicine*.

The role of repetition in the learning of paired associates. LESTER L. CLARK, THERON G. LANSFORD, AND KARL M. DALLENBACH, *University of Texas*.

Secondary reward value and the acquisition and extinction of runway performance. F. T. CRAWFORD, *Georgia State College*.

Nonconsummatory food reinforcement of an operant in the chicken. W. T. JAMES, *University of Georgia*.  
Drive state during drive discrimination learning. LYNE STARLING REID, *University of Virginia*.

### Physiological and Comparative Psychology I

ARTHUR J. RIOPELLE, *United States Army Medical Research Laboratory*, Chairman

An analysis of aggressive behavior. MILTON A. GRODSKY, *Army Air Defense Human Research Unit*.

The effect of stimulating the reticular activating system upon reaction times in the cat. WALTER ISAAC, *Emory University*.

Alloxan diabetes and running activity in the rat. L. J. PEACOCK, *Verkes Laboratory of Primate Biology*.

The effect of bilateral subcortical lesions on sound induced seizures. RALPH MCC. CHINN, *University of Mississippi and Emory University*.

### Physiological and Comparative Psychology II

GILBERT W. MEIER, *Vanderbilt University*, Chairman

Thermal sensitivity of the cornea. DANIEL R. KENSHALO AND JOHN P. NAFE, *Florida State University*.

Effect of adrenal demedullation on an avoidance response in the rat. KENNETH E. MOYER, *Carnegie Institute of Technology*.

Conditioned learning in the fetal albino rat *in utero*. WILLIAM W. DAWSON, *Florida State University*.

Spontaneous aggressiveness in young castrate C<sub>3</sub>H male mice treated with three dose levels of testosterone.

JOHN M. BEVAN, WILLIAM BEVAN, AND BEN S. WILLIAMS, *Davidson College and Emory University*.

## Comment

### Comment on "The Needless Assumption of Normality in Pearson's $r$ "

Nefzger and Drasgow (*Amer. Psychologist*, 1957, 12, 623-625) have performed a valuable service by emphasizing the fact that the computation of  $r$  does not require an assumption of normality in the marginal distributions. They have, however, failed to take the equally desirable next step of pointing out that linearity also need not be assumed in the computation of  $r$ . The validity of this assertion rests to a certain extent on the meaning one adopts for certain terms Nefzger and Drasgow use. Their statement (p. 623):

The crucial assumption in the derivation of the product-moment correlation coefficient is one of linearity: it must be tenable that in the population the true relation between the two variates can be represented by an equation of the form  $Y = AX + B$ .

does not make clear what is meant by the "true" relation. I suspect that it refers to the relation between the independent variable and the line of means of the dependent variable for successive fixed values of the independent variable.

The next term to be defined is "assumption." The implication apparently is that if you use a linear prediction equation you assume it to be the true relation in the sense just defined. I think this implication is unnecessary and that considerable confusion can be avoided by not making it.

We may derive the formula for  $r$  simply as the slope of the straight line which best fits the data points in a scatterplot in the least squares sense, when the axes of the plot are calibrated in  $z$ -score units. Or, put another way, we may realize that the "true" relation between two variables is nonlinear, but we may feel that a linear equation for predicting one from the other is a close enough approximation for our purposes. We then wish to make the predictions in such a way that the mean squared error of prediction is minimum. The product-moment correlation appears in the coefficient of the independent variable in the prediction equation. Thus, in the prediction situation,  $r$  can be computed without the assumption of the "truth" of a linear relation. The assumption is made, however, if we use  $r$  to describe the degree of functional dependence of the two variables or to compare the relative strengths of two different relationships. Or, more strictly, such statements and comparisons can be made only if the amount of nonlinearity is known or is equal in the two situations compared.

Nefzger and Drasgow may have left an erroneous

impression in their discussion of the standard error of estimate and the coefficient of determination,  $r^2$ . In the case of the standard error of estimate, the question seems to be a matter of the definition of the word "use" in the sentence: (p. 624): "The use of both of these statistics depends on the assumption of normal and homogeneous dispersions . . ." If an error of prediction is defined as the difference between the actual value of the dependent variable and the value predicted by a regression equation, then the standard deviation of these errors of prediction, for the data on which the correlation was computed, is the standard error of estimate. No requirements of normality, linearity, or homoscedasticity need be met. It is true, however, that we usually wish to make some kind of confidence statements about particular dependent variable scores, and this does require that we know something about the shape of the error distribution. Normality, linearity, and homoscedasticity are convenient assumptions in this case. (Nefzger and Drasgow's quotation—on page 624—from McNemar occurs in a context in which McNemar uses the normal curve to establish confidence intervals.)

The coefficient of determination is "an index of the proportion of variance in one variable,  $z_y$ , which is attributable to the variance in the other variable,  $z_x$ " (page 624) only if "attributable" is defined a certain way. What  $r^2$  does give is the ratio of the variance of predicted values to the variance of actual values of the dependent variable, for the data on which the correlation was computed. Again, this relationship is not dependent on normality, linearity, or homoscedasticity.

A short example may help to make clear the points brought out thus far. I propose to compute the product-moment correlation between the values of the first five digits and their cubes. This relation is certainly nonlinear, but  $r$  can be computed and the standard error of estimate and the coefficient of determination can be given meaning. The data are displayed in Table 1. Here it may be seen that, although the relation between numbers and their cubes is perfect,  $r$  is only .944.

The linear equation for predicting  $X^3$  from  $X$  is

$$Y = 30.4X - 46.2$$

We may apply it to predict an  $X^3$  from each  $X$ , get the variance of these predicted values, the errors of prediction, and the standard deviation of the errors. The results are shown in Table 2.

The variance of  $Y$  (the predicted  $X^3$ ) is 1848.32,

and it may be seen that this variance plus 229.68, the variance of the errors of prediction, sum to 2078, the variance of the actual  $X^2$ . The ratio of the variance of predicted values to the variance of actual values is .889;  $r^2$  is .891136—the two agree within rounding error.

The standard deviation of the errors of prediction is 15.2. The standard error of estimate, computed by the formula  $\sigma_{X^2} \sqrt{1-r^2}$  is 15.1—again the two agree within rounding error.

It is thus possible when the relation between two variables is nonlinear to compute a product-moment correlation coefficient and use it to compute the coefficient of determination and the standard error of estimate. These statistics may then be interpreted in a restricted way without any assumptions of linearity, normality, or homoscedasticity. If the interpretations are extended, as they usually must be to be of any practical use, the assumptions are useful in providing distributions which may form the basis of confidence statements. It seems to me that it is worthwhile to distinguish between the assumptions that are necessary for the computation of a statistic and the assumptions that are usually made in its use.

JOHN E. MILHOLLAND  
University of Michigan

The article by Nefzger and Drasgow . . . seemed to me to miss the point at issue. Every competent statistician realizes that a formula for  $r$  can be derived without assuming normality either in the marginal distributions or in the bivariate surface. Nefzger and Drasgow give a valid demonstration of this fact, although a rather awkward one. (Their Equations A and B are otiose. Their result could have been derived immediately from Equations I and II by substitution.) However, the important point is not the necessity of assuming normality in the derivation of  $r$ , but rather the meaningfulness of  $r$  in the absence of this as-

TABLE 1  
COMPUTATION OF  $r$

$X^2$	$X$	$X(X^2)$	$X^3$	$(X^2)^2$
1	1	1	1	1
4	2	16	8	64
9	3	81	27	729
16	4	256	64	4,096
25	5	625	125	15,625
$\Sigma$	55	979	225	20,515
$\Sigma/5$	11	195.8	45	4,103
$r = .944$		$\sigma_{X^2}^2 = 2,078$		

TABLE 2  
COMPUTATION OF VARIANCES OF PREDICTED  
AND ERROR SCORES

$Y^2$	$Y$	$X^2 - Y$	$(X^2 - Y)^2$
249.64	-15.8	16.8	282.24
213.16	14.6	-6.6	43.56
2,025.00	45.0	-18.0	324.00
5,685.16	75.4	-11.4	129.96
11,193.64	105.8	19.2	368.64
$\Sigma$	19,366.60	225.0	1,148.40
$\Sigma/5$	3,873.32	45.0	229.68

sumption. To understand this matter of meaningfulness, consider the three following cases:

1. *Normal correlation.* In this case the joint distribution of  $x$  and  $y$  is represented by the normal correlation surface:

$$Z = \frac{N}{2\pi\sigma_x\sigma_y\sqrt{1-r^2}} e^{-\frac{1}{2(1-r^2)}\left(\frac{x^2}{\sigma_x^2} + \frac{y^2}{\sigma_y^2} - \frac{2xyr}{\sigma_x\sigma_y}\right)}$$

Obviously, the two means and sigmas being known,  $r$  supplies the only additional information needed for a complete description of the joint distribution of the two variables. In other words, it gives back all the information contained in the original scatter diagram. If one can assume a normal correlation surface,  $r$  is meaningful in a completely satisfactory sense.

2. *Linear correlation.* This is hard to define with precision. Nefzger and Drasgow define it as the fulfillment of the condition,  $z_y = az_x$ . It is hard to take this seriously; for it means that  $z_y$  is a linear function of  $z_x$ , a condition fulfilled only when  $|r| = 1$ . If the means of all the  $x$  arrays in a bivariate distribution are precisely collinear, and, similarly, the means of all the  $y$  arrays, the correlation would be admittedly linear; but this condition is too extreme to be fulfilled very often in practical cases. Other tests have been proposed—for example, the Blakeman test or the chi square test for goodness of fit applied to the regressions—but these seem to be seldom used. In practice, most statisticians probably assume linearity unless its absence is strikingly apparent. Note that  $r$  is much less meaningful in the case of non-normal linear correlation than in the case of normal correlation. In the latter case, each value of  $r$  uniquely determines a bivariate frequency surface. In the former case, even if the correlation is linear in a rigorous sense, there are an infinite number of surfaces corresponding to each  $r$ , except in the special case,  $|r| = 1$ .

3. *Nonlinear correlation.* It is curious that Nefzger and Drasgow do not seem to realize that the assumption of linearity is not needed in their derivation of the

formula for  $r$ . Essentially what they do is to fit a straight line to the points of a scatter diagram in such a way as to minimize the sum of the squares of the vertical distances of the points from the line. In other words, they fit a line to the points by the method of least squares. It is obvious that one may, if one insists, fit a straight line even in the case where the regression is clearly nonlinear. However, if the departure from linearity is marked, the fit will be very poor; and it is appropriate to raise once more the question of meaningfulness. If the regression is obviously J shaped, what meaning can we attach to  $r$ , a statistic designed to tell us how well a straight line will fit the data? There is an important answer to this question. The effect of the departure from strict linearity is always to lower the absolute value of  $r$ . Therefore, if we insist on calculating  $r$  in the nonlinear case, we can conclude that the "closeness of relationship" (however we define that term) revealed by  $r$  in this case is at least as good as in a linear case yielding an  $r$  of equal magnitude. Thus the use of  $r$  in studying regressions which are not strictly linear is a conservative procedure. This is the chief justification for the common practice of using  $r$  without testing for linearity.

The conditions appropriate for the use of Pearsonian  $r$  are both narrower and broader than Nefzger and Drasgow seem to realize. They are narrower in the sense that the most meaningful interpretation of  $r$  demands a normal correlation surface. They are broader in that  $r$  is not without meaning even in cases where the departure from linearity is considerable.

PAUL HANLY FURFEY  
Catholic University of America

I should like to call attention . . . to a theorem of Narumi which appeared in Volume XV of *Biometrika*, pp. 77-88, 209-221, under the title: "On the General Forms of Bivariate Frequency Distributions Which Are Mathematically Possible When Regression and Variation Are Subjected to Limiting Conditions." Subject to very general conditions, such as differentiability of the probability function, the theorem states that double linear regression and homoscedasticity together imply that the relationship between the variables is characterized by the normal correlation surface, excepting the trivial cases of complete dependence or complete independence. A normal correlation surface must, of course, have normal marginal distributions and normal array distributions. Hence the concluding statement of the second from the last paragraph on page 624 [of Nefzger and Drasgow's article] is clearly misleading.

In many psychological problems the correlation coefficient is not used as a regression coefficient for predictive purposes but rather as a symmetrical measure

of the relationship between two variables. For these cases, assumptions of linearity and homoscedasticity, if made at all, must be made for both variables. If one makes only linearity assumptions, the most useful information, relating to dispersion, is lost. Psychologists do not generally think in terms of "the rate of change" of one test score in relation to a second, for example. The computation of a statistic requires no assumptions at all, but for the statistic to be useful it must be interpreted in terms of a model whose implications are clear. It would seem that the implications of the normal correlation surface model are clearer than those of the linearity-homoscedasticity model. What hidden implications exist for the linearity model? This information is not immediately at hand; in any case its utility for the psychologist seems sharply limited.

In view of the somewhat complex and somewhat controversial nature of the question, would it not be a preferred policy to refer contributions such as this of Nefzger and Drasgow to a journal which is routinely concerned with the presentation of all sides of statistical controversies?

ROLFE LAFORGE  
University of Illinois

**Editor's Note.** *The Editor will be pleased to follow the above suggestion and hereafter refer all manuscripts on purely statistical issues to other journals. APA's Publications Board is wrestling with the problems arising from the large number of such manuscripts submitted to APA journals. The American Psychologist intended to be helpful when it accepted the article by Nefzger and Drasgow after consideration by several editorial consultants particularly qualified in the field of statistics applied to psychology.*

\* \* \*

### Clarification of Degree Trends in Psychology

About a year ago (*Amer. Psychologist*, 1957, 12, 229-230) Recktenwald called attention to the drop in the number of undergraduate degrees in psychology which had occurred from 1950 to 1954. The implication of his comment was that psychology should be concerned about the decline in popularity of psychology as an undergraduate major. Actually, however, the decline in the number of undergraduate degrees in psychology from 1950 to 1955 was part of the decrease in all undergraduate degrees during this period which resulted largely from a decline in the pool of young people of college age during these years. In 1956 this trend was reversed, and we can now look forward in the foreseeable future to an increase in the number of undergraduate degrees in psychology that will reflect the increase in total undergraduate degrees.

Recently (*Amer. Psychologist*, 1957, 12, 754-755) Asher commented on Recktenwald's original note.



Asher cited evidence in support of the position that, although there was a slightly greater proportionate decline during the first half of this decade in the number of undergraduate degrees in psychology than the decline in total undergraduate degrees, this was not so serious as had been implied in Recktenwald's original comment.

Things would have been fine if Asher had stopped there. But he went on to discover a trend of his own. Taking note of the sharp drop in the number of master's degrees awarded in 1956, he constructed a rather complicated table by which he predicted the total number of doctorates in psychology to be awarded each year to 1960. These projections were based on an estimate of the percentage of recipients of the master's degree who would receive the doctorate three years later.

There is an error in this line of reasoning. The decline in the number of master's degrees awarded in psychology is not based on a declining pool of graduate students but rather on a decline in the requirement of the master's degree as a stepping stone to the doctorate. Many doctoral programs, particularly in clinical psychology, no longer require that the student complete his master's degree along the way. At Western Reserve University, for example, we will award approximately 20 PhDs this year, but less than half of the people receiving these doctorates will have received a master's degree.

Using his system, Asher predicts that only 472 doctorates will be awarded in 1960. This is a serious underestimate. The total number of doctorates to be awarded in all fields will take a sharp upturn next year. The percentage of all doctorates awarded each year that are in psychology has increased from 3.9% in 1948 to 7.2% in 1956. If we use 7% as a conservative estimate of that percentage of all doctorates which will be awarded yearly in psychology, we find that in all probability there will be more than 700 doctorates awarded in psychology in 1960. This number will increase yearly to a thousand or more in 1965 and will continue at this rate thereafter. I believe it is important for those concerned with planning manpower needs and resources that these more realistic estimates be noted.

GEORGE W. ALBEE  
*Western Reserve University*

### Common Problems of Training

As part of the proceedings of the fifteenth International Congress of Psychology, held in Brussels July 28-August 3, 1957, 16 psychologists from 11 countries (Europe and the USA) were brought together by invitation to consider "the theoretical and professional training of the psychologist." This colloquium, convened by Alastair Heron and with Donald Marquis as Chairman, was expected to meet only once, but by unanimous decision a second meeting took place. This may provide some evidence of the interest aroused by the topic, but it testifies also to the ignorance of one another's problems revealed at the first session.

Since this was in no formal sense a representative gathering, and those present could not speak on behalf of their national psychological associations, it was agreed that any report of the colloquium should be confined to stating the major points that emerged from several hours of frank and mostly informal discussion. These were as follows:

1. What are the major components of a balanced curriculum?

2. Do psychologists need a philosophic as well as a scientific education?

3. Is there a conflict between academic education and professional training of the psychologist?

4. Does the graduate professional training of psychologists rightly fall within the purview of the university?

5. Can applied (or professional) psychology differ from every other profession by being based solely on an academic preparation?

6. Is it desirable that every professional psychologist should at some point have at least two years' practical nonacademic training and experience?

7. How much specialization is needed to meet the demands of difference applications?

8. Does the form of our training determine the kind of student we get (for example, if instruction included more mathematics, would this attract a different sort of student)?

9. What are the implications of the fact that employers of psychologists are competing with the universities in relation to graduate "training"?

Despite the very great differences between countries in the status of psychology, the content of undergraduate education, and the development of graduate professional training, there is evident here a general preoccupation with what is for all practical purposes a single issue. In facing it, those taking part in the colloquium recognized that psychologists of each country will have to work out means that are appropriate to the needs and perceptions of their own culture. Meanwhile it is hoped that publication of this report in each country will serve as a fresh stimulus to local discussion of the issues, against the background of the realization that others elsewhere are similarly engaged.

ALASTAIR HERON  
*University of Liverpool*

### Tax-Free Stipends

*Editor's Note. During the past year, the APA Central Office has received several inquiries about tax exemption on stipends received for internships in clinical psychology. In the October 1957 American Psychologist, Marchionne and Brodshatzer, in a comment "Tax-Free Stipends for Clinical Psychology Internships," suggested procedures which might simplify an intern's tax claim. The following is an example of a program that has been approved by the United States Treasury. It is published here for the information of those who may be seeking solutions to the problem.*

The State of New Jersey has for some time offered a tax-free Junior Fellowship in Psychology. The current stipend is \$3,000, and no taxes are withheld. The Junior Fellowship follows a proposal outlined to and accepted by the Tax Rulings Division of the United States Treasury. A copy of the ruling appears below.

HENRY P. DAVID

Department of Institutions and Agencies  
State of New Jersey

\* \* \*

Mr. Edward F. Schlotter  
Assistant Chief, Bureau of Accounts  
The New Jersey Department of Institutions and Agencies  
135 W. Hanover Street  
Trenton 25, New Jersey

Dear Mr. Schlotter:

We have a letter dated March 5, 1957 and enclosure from Mr. Cantwell Walsh, Acting Director, Division of Business Management, in connection with prior correspondence concerning the taxability of Junior Fellowships in Psychology offered by the above-named Department to qualified applicants for one year.

The information submitted is substantially as follows:

At the time of application, applicants should have passed preliminary examinations for the Ph.D. degree or attained a Masters degree in psychology, or completed a minimum of thirty credits in graduate work. The purpose of this program is to develop professional growth through supervised experience in psychological evaluation, individual and group psychotherapy and research. On successful completion of the grant, the student will be eligible for employment as a "Clinical Psychologist II" (Junior Staff Member) in the New Jersey System. During the tenure of the grant the student may elect to divide his time between two different institutions. He will have an opportunity to engage in supervised clinical practice with patients representing a wide range of problems. Where supervised counseling and/or psychotherapy is part of the psychological service offered, the fellow will participate to the extent deemed appropriate by his supervisor. Each fellow is supervised by the Director of Psychology of the institu-

tion or agency. In addition the Chief Psychologist of the Department of Institutions and Agencies holds monthly meetings for all fellows. These are designed to intensify training in areas normally discussed in supervisory conferences.

It is stated that the Junior Fellow is not an employee in a traditional sense. Since his stipend is paid over a 12-month period, he is carried on the payroll of the institution to which he may be temporarily assigned; however, he does not have the usual Civil Service privileges, appointment is limited to one year, and he is under direct supervision of the Chief Psychologist of the Department of Institutions and Agencies, not the institution. No regular employment services are required during this period, no agreement is signed by Junior Fellows either upon granting of the award or as a condition thereto, or with respect to State employment after completion of the program, and they are not eligible for benefits available to other State employees.

A Junior Fellow is assigned to a State facility for the express purpose of receiving advanced individual training in psychology. The Junior Fellow devotes about 60 percent of his 37 hours per week to supervised clinical evaluation, about 20 percent of his time is given to some type of supervised therapy experience, and the remaining 20 percent is spent in staff meetings, especially assigned seminars arranged by the Chief Psychologist, library research, and interprofessional meetings. He is also encouraged to work toward his Ph.D. dissertation and to the collection of clinical material at the institution to which he is assigned for this period of training.

Section 117 of the Internal Revenue Code of 1954, relating to scholarships and fellowship grants, provides that subject to certain conditions and limitations, amounts received under such grants are excludable from gross income. The exclusion also applies to amounts received to cover expenses for travel, research, clerical help or equipment, which are incident to the fellowship to the extent that the amounts are expended for these purposes.

It appears from the facts submitted, that the amounts received by the individuals in question constitute fellowship grants in that the primary purpose for the research and study is to further their education and training in their individual capacities. (Section 1.117-4(c) of the Income Tax Regulations. A copy of Treasury Decision 6186 in which this section is included is enclosed.)

On the basis of the information submitted and since the grantor of the fellowships is the State of New Jersey, it is our opinion that the grants fall within the provisions of section 117(b) (2) of the 1954 Code, subject to the limitations set forth therein. (See section 1.117-2(b) of T. D. 6186.)

Very truly yours,  
/s/ H. T. Swartz  
Director, Tax Rulings Division

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# Psychology in Action

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## AN INTEGRATED COURSE IN BIOLOGY AND PSYCHOLOGY

SHELDON J. LACHMAN

*Wayne State University*

THE problem of providing a broad and sound education in science for liberal arts students has led many colleges and universities to establish integrated science courses. For the most part, these have been physical science courses which have included content selected from two or more fields—astronomy, physics, chemistry, geology.

Within the last few years, an Integrated Course in Biology and Psychology has been developed at Wayne State University through the cooperation of the Departments of Biology and of Psychology. The purposes of this paper are to present the objectives of this course, to consider its content, and to assess its values and limitations.<sup>1</sup>

### OBJECTIVES OF THE INTEGRATED COURSE

The purposes of the course are to provide the student with: (a) an overview of the two disciplines, biology and psychology, while emphasizing mutual and reciprocal relationships and stressing the near inseparability of the two fields; (b) a knowledge of the scientific method as it applies to biology and psychology; (c) an appreciation of the role of the biological and the psychological sciences in our culture and in the solving of practical human problems.

The focus is upon general knowledge and broad principles which are stressed at the expense of attention to a vast quantity of detail. Since the course provides a survey or overview and is designed for students who do not intend to major in science, some might prefer to call it a general education course.

### COURSE CONTENT AND ORGANIZATION

The offering is firmly anchored to both the physical and social sciences. It is bound to the physical sciences primarily by indicating the physical and chemical nature of protoplasm—the fundamental biological substance. It is bound to the social sciences by specifying some of the biological and psychological foundations of culture—man's great social achievement. Since psychology is classified as a biological science at Wayne State University, the four semester hours credit granted

may be used to satisfy degree requirements in the biological science area.

In general, the course begins with a consideration of the fundamental biological functions of protoplasm, later examines basic and advanced psychological processes, and finally considers social interactions among organisms. Each class meets for five hours per week. Three one-hour lecture-discussion sessions and one two-hour laboratory comprise these five hours.<sup>2</sup>

The course is conducted in a semiformal manner. Organized lectures are presented, but students are free to raise questions or make comments at any point. Frequently these questions and comments determine the nature of the subsequent content. The course is not rigidly structured. A general plan is tentatively worked out by the instructional personnel prior to the beginning of the semester. However, the specific sequence of major topics within the general plan is often altered in terms of "student need" as indicated by class discussions. Principles rather than specific facts are stressed. The instructional staff for each section consists of one representative of the biology department and one of the psychology department.

The course, elected chiefly by freshmen and sophomores, has no prerequisites other than matriculation in the university. No single volume encompassing the areas considered appropriate to the objectives of Biology-Psychology has been found, and, therefore, no single textbook is used. Rather, a group of contemporary texts in biology and in psychology are indicated to the student early in the semester. These may be used for reference purposes at his discretion. From time to time, mimeographed materials are distributed for purposes of orientation or for clarifying or amplifying certain aspects of the course content. On occasion, brief publications, such as the psychology and the biology books for introductory courses in the College Outline Series, have been prescribed as textbooks.

The laboratory is extremely varied with regard to its contents and the procedures employed. In the beginning, it was a student participation laboratory, i.e., a laboratory in which students either directly observed and recorded observed phenomena or participated as

<sup>1</sup> A more detailed report concerning the course is available from the author on request.

<sup>2</sup> Recently there have been five one-hour meetings each week, instead of three one-hour meetings and a two-hour laboratory.



subjects. However, as the number in the course has increased, it has been necessary to include more demonstrations, but the attempt has been made to retain maximum student participation during the laboratory periods. Like many other introductory laboratory courses, this one is designed to acquaint the student with the tools and methods of science—in this case the microscope, the memory drum, the polygraph, the maze, etc. He also gathers and organizes data. Titles of some of the topics typically considered in the laboratory are: Observations through the Microscope, Plants and Plant Behavior, Physiological Changes during Emotional Behavior (a polygraph demonstration), Reflexive Behavior and Its Basis in the Nervous System, Survey of Plant and Animal Kingdoms, Observations of the Brain, Sensory Processes: Phenomena of Vision and Audition, Embryological Development and the Development of Behavior, Learning Demonstration, Level of Aspiration, Psychological Testing and Psychological Statistics.

Several different demonstrations of learning are possible in the laboratory. One demonstration involves three or four volunteer student subjects who have practice periods in front of the class in learning to rapidly place pieces into a form board; usually the Seguin Form Board has been used. Time records are posted on the blackboard immediately after each trial. Students working from their observations and the raw time data independently prepare reports, including a statement of purpose, description of apparatus, summary of results with appropriate learning curves, and interpretations of the findings. These reports are due at the class meeting the day following the laboratory period. Relevant principles from the student-laboratory results are pointed out in subsequent discussions and illustrations.

The Level of Aspiration laboratory period involves a letter-digit substitution problem. The student is not instructed as to the objective of the demonstration; he apparently believes that it is a learning problem. He is required to indicate his level of expected accomplishment prior to performance and his actual performance in substituting appropriate letters for digits after each practice period. The time allowed for each practice period is systematically decreased by the experimenter to maximize the probability of failure, and it is increased to maximize the probability of success. Several principles relating to level of aspiration (well established in the journal literature) are developed on the basis of inductive inference from the data of the students.

The Psychological Testing and Psychological Statistics laboratory period involves administering a psychological test, usually the Seashore Test of Musical Talent, which is scored in class. Results are discussed.

Samples of the accumulated data are treated statistically. Measures of central tendency, variability, and sometimes correlation are computed. Subgroups of data by sex, by age, by college class level, etc. are often contrasted and compared.

Objective examinations, usually four throughout the semester plus a final examination, are designed to assess academic achievement. Items are mainly multiple-choice and matching type, although completion-type items are also used.

Several distinct themes are developed within the course in order to accomplish a major purpose, namely, to demonstrate the interrelationships and near inseparability of the disciplines, biology and psychology. These include emphasizing: (a) the scientific conceptions shared by biology and psychology, e.g., that understanding is dependent upon objective, cautious, direct observation of objects and events in the universe, that the universe is intelligible to man, and that theories are useful in the development of scientific knowledge; (b) the functions of protoplasm, i.e., that all living things are made up of protoplasm and differences in organisms are dependent upon differences in protoplasm; (c) the fact that organisms may be arranged on a scale in such a way that biological and psychological similarities and differences are evident; (d) the observations indicating that biological structure sets limits on behavior and on psychological potentialities, etc.

#### EVALUATION OF THE COURSE

A number of observations permit assessment of the course. Some of these suggest that the course has been successful in accomplishing its stated objectives.

1. Satisfactory achievement in the functional use of scientific method(s) and in psychology has been indicated by the results on a common group of multiple-choice items used in testing students in the Introductory Psychology course and students in the Biology-Psychology course. Significant differences in achievement test scores were not found. If these test results are accepted as valid indicators of knowledge of scientific methodology and of psychology, the achievement of the two groups is approximately equal.

2. Student evaluations of the course by means of anonymous questionnaires and rating scales are substantially favorable in terms of student impressions of what they have learned.

3. The Science Self-Study Committee, consisting of representatives from the departments of mathematics, physics, chemistry, geology, biology, and psychology, has recently recommended to the Faculty of the College of Liberal Arts at Wayne State University that nonscience majors and physical science majors elect the Integrated Course in Biology and Psychology (or an alternative equivalent) to fulfill the group require-



ments in the biological science area for graduation with the bachelor's degree.

4. It is doubtful that the enrollment in a course and its record in attracting majors is a useful indication of its success. However, it might be pointed out that, although the course is designed for persons who do not intend to major in science, several persons who have completed the course have either elected the major in psychology or in biology or have indicated their intent to do so. The class size has grown steadily during the several semesters it has been offered, from less than 5 to more than 60.

In contrast to the several evidences of success, a number of weaknesses, or inadequacies, are indicated. The fact that the content of both biology and psychology are organized into a single four-hour unit constitutes the course's principal strength, *integration*; but

this also probably constitutes its principal weakness, *lack of depth*. It is possible to survey or present the highlights of the fields in the time allowed. But there is little opportunity to explore in sufficient intensity or detail samples of the substratum of supporting evidence, nor to make very many excursions into interesting areas related to the most prominent topography of the two fields. It is believed that two integrated four-hour courses in the biology-psychology area might provide sufficient time to achieve to a greater extent the worthwhile goals of maximizing student opportunity for a perspective of continuity in science; such a sequence might also provide for a sufficient quantity of concrete research data and other specific detail to enable the nonscience major to gain a sound foundation in the fields of biology and psychology and to gain an enhanced appreciation of the nature of science.

## TEACHING PSYCHOLOGY BY TELEPHONE

R. L. CUTLER, W. J. McKEACHIE, AND E. B. McNEIL

*University of Michigan*

"TEACHING by telephone? You mean television, don't you?" This was the invariable response when someone heard us say something about our telephone class. But we *were* teaching by telephone.

Our story begins in the early spring of 1957 when the authors were invited by the Michigan Bell Telephone Company to determine the practicability of presenting college level instruction by telephone. The company felt that many adults might participate in educational programs in their own living rooms who would not be willing to drive to a university extension center. But first they wanted to determine whether the plan would work, not only technically but educationally.

### THE EXPERIMENT

To answer their questions we set up a simple experimental design. Thirty-two volunteers were recruited from among the employees of the Michigan Bell Telephone Company and members of the Ann Arbor Chapter of the American Association of University Women. From these 32, two groups of 10—matched for education, intelligence, and sex—were selected for actual participation in the experiment. The entire group met for dinner prior to the course to take the following pretest measures:

1. A content examination, covering information to be presented in the course. This was an objective examination, including 17 true-false items and 17 multiple choice items.

2. The Allport-Vernon Study of Values
3. The California "F" Scale
4. An Attitude Toward the Negro Questionnaire, developed by the senior author
5. The Otis Self-Administering Test of Mental Ability

### *The Course of Instruction*

For purposes of the experiment, a special eight-weeks course in elementary psychology was designed and presented. The content of the course included conventional topics in general psychology but emphasized personality. One of the two groups participated in class meetings face-to-face. The other group was taught by telephone. A balanced design was used in which the instructors alternated lessons for the two groups in such a way as to control for order, practice effect, interaction between topic and instructor, etc.

To avoid the possibility that students would compensate for deficiencies in instruction by studying a text, no text was used; although it was suggested that students read Benedict's *Patterns of Culture*, Mead's *Male and Female*, Huxley's *Brave New World*, and Lindner's *The Fifty-Minute Hour*.

### *Teaching the Course*

Both groups were taught by a mixture of informal lecture-discussion, role playing, and demonstration methods. The classes met for 90-minute class periods

once a week. While members of the face-to-face class were driving to the campus, attempting to find parking space, and gathering in the classroom, members of the telephone class were preparing for a more-or-less quiet evening at home. In each home, an Executone speaker-microphone had been installed permitting everyone in the class to talk to everyone else as soon as the instructor turned on the switch. The "more-or-less quiet" in the sentence above refers to the fact that one housewife had her set in her bedroom where she could lie down if she wished during the lesson, while other students invited guests to listen to the class sessions in their homes.

Meanwhile, lights were going in the basement of the instructor's home. While his wife put the children to bed upstairs, another instructor's wife and a representative of the telephone company were settling into easy chairs and preparing to turn on a tape recorder as soon as the class began. A few minutes before class time, the instructor turned on the amplifier and chatted briefly with class members as they checked in on the circuit.

The class began like any other; but because we were eager to test the potentialities of telephone teaching, we tried almost everything. Some lessons were straight lecture; others were conducted almost entirely by discussion. Role playing was used twice: once with the participants talking as if in a face-to-face situation, another time with the situation involving a teenager calling home to ask permission to stay out later. (This one was a real hit!) The Menninger recording "Meet the Mind" was used as a stimulus for discussion. No one went to sleep, not even our wives!

#### RESULTS

At the end of the course, both classes were once again the guests of the telephone company for dinner, post-tests, and fond farewells. (One of the high points of the dinner for the telephone class was the opportunity to see how their images of their classmates differed from reality.) The results of these post-tests were that:

1. Both groups showed significant gains in knowledge as measured by the examination, and there was no significant difference in gain between the two classes.

2. Both groups changed significantly in the direction of more democratic attitudes as measured by the California "F" scale, and again the between-group difference was not significant.

3. No significant changes occurred on the Allport-Vernon or the scale of attitude-toward-Negroes.

Following the conclusion of the course of study, personal interviews of approximately one hour's duration were conducted with each of the participants. These interviews indicated that all students were enthusiastic about the course. Only one of the telephone group expressed the wish that she had been in the face-to-face group, while four of the face-to-face group members stated that they wished in retrospect that they had participated in the telephone group. These statements were made in terms of curiosity about what the new method was like, convenience of being able to take the class at home, and interest in participating in what might prove to be a pioneer effort.

Typical comments of the telephone class were:

This is the most comfortable way of taking a course I've ever heard of. I even washed my hair and ironed during class, but I really enjoyed it and got a lot out of it. I think I felt more free to participate than I would have in a regular class.

This was interesting and I learned many new things, but there are more distractions at home.

We discussed the course frequently outside of class, but I still would have liked to see the other students' reactions when I said something in class. Nevertheless the course was very worthwhile.

My wife sat in, and we both enjoyed the class and the suggested readings.

I learned enough to know how much more I'd like to learn. I wish we could continue.

Despite some evidence of the Hawthorne effect, the authors are now convinced that teaching by telephone is practical. While we missed visual contact with our students, we found telephone teaching to be more rewarding than television teaching. The possibility for immediate interaction between students and instructors during the class period makes the technique particularly appropriate for teaching courses in which it is important that students get prompt feedback on their ideas.

Telephone teaching might also be useful in areas of highly specialized instruction at the graduate level or in business or industry, where interested students from a series of geographically remote points might be brought together for contact with an instructor who possessed special talents in their field.

Our conclusion? It was fun—and probably educational, too!

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## Psychology in the News

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### *This Week, That Week, So Long as They Love Psychology . . .*

There is a Sunday supplement called *This Week* which it seems almost every week touches upon psychology. Did you see that week it carried photos of Nicholas Pastore and his duck, Plato, who can recognize a triangle? And another week brought the face of Albert Ellis and his counsel that it isn't fatal for men to marry women older than themselves. One out of seven grooms do!

*This Week* is also addicted to so-called psychological quizzes, the kind of thing which urges the reader to pick up a pencil and check off little squares then and there. Are you really bored with life? Check these twenty questions, read this entire article, and see how really bored you can be. Or, to pep up your Sunday, ask your wife these twelve questions; and, if she gives nine positives, it means she is unfaithful to you. (Now wouldn't that wife quiz be as good as the last magazine quiz you read?)

Neither if these particular quizzes have appeared any week in *This Week*, but that seems roughly the kind of thing they are. Now our spies report, factually, without prejudice, that *This Week* magazine is scraping all these Psycho-Quizzes into one luscious book.

### *Values and Approximations . . .*

A press release from the University of Michigan starts off: "Approximately 60 research projects valued at more than \$1.2 million were conducted by the University of Michigan Institute for Social Research during 1957-58." This is a line which we doubt ever was written by the Director of that Institute, Rensis Likert. By that "value" judgment, expressed statistically in millions and fractions thereof, the author of the release must mean the cost. Why, many people value Likert alone as worth a million. Another interesting phrase, and a most accurate one, is the *approximately* applied to research projects. It is not easy to look over a research place and say: *Now there's a project*; no, it really amounts to two; and that one, well, that one is really only .27 of a project. And some are zero, and some are said to be minus—and contagiously so. So perhaps we should refer the whole thing back to the press office at Michigan. Or we

shall defer to the American Statistical Association—the President of *that* association this year is Rensis Likert.

### *This Year, That Year, So Long as You've Got Mental Health . . .*

Plans for a World Mental Health Year in 1960, sponsored by 108 mental health and professional societies, have been announced by the New York office of the World Federation for Mental Health. The plans will follow the pattern of the International Geophysical Year, said the announcement. The purpose of the WMHY is "to stimulate mental health activities, including research, with a maximum of international cooperation." Some of the major objectives of the year will be

. . . to increase the study of child development in different countries; to increase the knowledge of the many causes and the distribution of mental illness, and to improve and extend the teaching of the principles of mental health in medical and nursing schools, teacher training colleges, schools of social work, theological seminaries and similar centers of professional training. . . .

On the United States Steering Committee for WMHY will be Marian J. FitzSimons, Frank Fremont-Smith, John P. Gillin, Alberta Jacoby, Marian McBee, Mabel Ross, Ruth Simonson, George S. Stevenson, and Mottram P. Torre.

The American Psychological Association is a member of the federation and so is involved in this global project. But that does *not* imply the personal support of a certain grumpy experimentalist who expostulates that this enterprise may be A Good Thing, but can *not* be in the pattern of IGY. He says:

There are only two conditions which would make this activity comparable to IGY. You could set up a large-scale program for world-wide measurement of certain knowns and unknowns, these measurements to be taken by universally accepted methods. [And the second condition?] Well it would be something like IGY if the mental health people put themselves where the Russians put Laika.

And so he began to name people he would like to see Out There, but we decided these nominations are unprintable, in a journal like ours which is meant to be read by the entire family (of psychology).

*"Very Nicely" . . .*

The *Journal of the American Hospital Association* publishes a question-and-answer department for hospital officials. One letter asks:

How can a hospital write into its bylaws, rules, and regulations the status of individuals in allied fields to medicine, such as physicists, clinical psychologists, etc.? [The reply says:] As a sample and suggestion, here is the way one hospital did it very nicely: "Technicians in allied fields (physical therapists, biochemists, clinical psychologists, physicists, chiropodists, etc.) may render services to hospital patients under the following conditions . . ."

And then follow the usual and accepted items, such as establishing that certain folks—chiropodists and biochemists and psychologists and people like that—may not admit patients or write orders for patient care.

To which those technicians can only reply that they don't want to write prescriptions, but some surely will feel they could *write a directive* which would say it better. To some this may read very nicely, but to others icily. [CQ]

*Quote of the Month . . .*

Gerald Wendt, Science Editor of UNESCO:

If there is no war, the needs are exactly the same for we are engaged in a cold war, "cold" with respect to bullets but "hot" from the psychological standpoint. The Russians are aware that this is a very hot psychological war. We have lost battle after battle to them because they are after the minds of men. For this reason we need to give psychology a great deal more study than we have in the past.

*"Gateways to the Mind" on TV . . .*

An hour-long color television broadcast, latest in the Bell System Science Series, is scheduled for Thursday, October 23, at 8 P.M., EDT. Hadley Cantril of Princeton will appear on the program, which discusses the human senses and many forms of perception. Cantril will discuss two experimental arrangements: the trapezoid which memory interprets as a square, and the distorted room in which a boy looks larger than a man. Frank C. Baxter will be the main interpreter on this program.

*Coffee With . . .*

*Forbes*, "the magazine of business," in a personality article about a certain man becoming president of an old company, says:

To make sure A was as good as he said he was, B accommodatingly arranged for him to have breakfast with a personnel psychologist. Even before they got to the coffee, A had completely sold the *behaviorist*.

The italics are ours, the company is now A's, and the battle to win us a better public name than "head shrinker" remains open.

We suspect this use of *behaviorist* is not really a reflection of a prevalent name, but an example of a tired writer reaching for what he hopes will be an elegant variation. In any case, it is in that tired spirit that we close the orbs on *Forbes*.

—M. AMRINE

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### Clinical Trials (Historical Division)

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"You've got some kind of complex, Oedipus, but we haven't got a name for it yet."

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Reprinted from *Scope Weekly*, Courtesy of the Upjohn Company, Kalamazoo, Michigan.



# Psychology in the States

## State Association Survey—Chapter Two

From what their questionnaire replies say, one can deduce that state associations are trying on a lot of activities for size. The approaches are hardly uniform, let alone compulsive. If anything, the tendency is to do what comes naturally at the time. In some cases this is much, in others little; certain programs are very much this side of radical, others frankly venturesome. In any case, following are some of the activities currently finding favor or at least being put to the test.

**Public Information.** This area probably gives the best indication of the wide range of experimentation going on. No one of the state associations, of course, is doing all of these things; in some cases, in fact, the association does relatively little. Taken together, however, the current projects run the gamut from championing psychology's cause to solving the community's ills. One might divide them arbitrarily into the following categories:

### 1. Dissemination of Information

- Publicizing of speakers bureau
- Issuance of press releases
- Employment of a publicity man
- Compilation of public information brochure
- Showing of films
- Distribution of:
  - Newsletter (to key people)
  - "Psychologists in Action"
  - Directory of membership and certified psychologists

### 2. Liaison with the Mass Media

- Organization of TV series
- Conduct of radio program
- Writing of newspaper column
- Consultation with writers and program directors
- Monitoring of popular magazines and TV programs
- Adoption of clipping service

### 3. Community Services

- Consultation with public agencies (e.g., Traffic Department)
- Conduct of surveys (e.g., mental health facilities)
- Preparation of "briefs" on contemporary social issues
- Co-sponsorship of community projects (e.g., Mental Health Week)
- Sponsorship of public lectures by distinguished speakers
- Provision of referral service for psychological services
- Institution of placement service with listing of positions vacant in public service

Conduct of educational campaigns:

- APA ethical standards
- Mental health provisions in health insurance plans

### 4. Liaison with the Legislature

- Consultation with legislators
- Employment of lobbyist

### 5. Internal Public Relations

- Public information workshops
- Recruitment programs

**Inter- and Intraprofessional Relations.** That the foregoing is more than window dressing is apparent from the range of actual contacts which state associations and their representatives have with the various professions and organizations. The list includes at least the following: medicine, psychiatry, pediatrics, social work, sociology, education, and the ministry, as well as social scientists, students, public officials, and laymen in key positions. The organizations involved fall into the following kinds of clusters:

1. Regional and local psychological associations and psychologists in public service
2. Church, school, and PTA groups
3. State academy of science
4. State education association, state guidance association, department of public instruction
5. Medical association; state board of medical examiners; psychiatric, social work, and bar associations
6. State health department, health and welfare council
7. Mental health association, governor's mental health council
8. Associations for the disabled (e.g., the mentally retarded and the blind)

In the case of *intraprofessional* relations, two devices are becoming increasingly prominent. Twenty associations report an active newsletter exchange, reprinting in their own publications pertinent summaries from others' newsletters. And eleven associations indicate joint meetings with adjoining associations. In several cases, members of the APA Central Office have helped in the organization and conduct of special workshops, as well as provided consultation in certain areas.

**Ethics and Social Control.** Here activity has, by contrast, been less. Whether this augurs well for the future, attests the effectiveness of legislation, or reflects a policy of making haste slowly remains to be determined. In any event, only fourteen "incidents" are reported, with referral to the APA committee having been made in several cases.

Charges have in a few cases been brought against members; more often, however, against quacks or fringe groups. The "visiting committee" method has been used in the review of a member's practice; while in most other cases action involved an investigation, discussion of the offense with the offender, and, when necessary, further steps. In several cases, the above was sufficient to cause the uninformed to mend their ways and the baldly unethical to desist or even to leave town. In one case, a committee on ethics acted for the defense, causing unsubstantiated charges against members to be dropped. And in several cases, the committee tries to maintain close liaison with the board of examiners, especially since the problems frequently involve people engaged in private practice without sufficient training.

**Conditions of Employment.** This area shows more activity than might have been expected. The associations tend to carry on specific projects, with considerable similarity from state to state. In summary, the activities are these:

#### 1. Liaison with State Officials

- Briefing of officials concerning psychologists' qualifications, standards, and salaries
- Evaluation of psychologists' qualifications for agency officials
- Consultation with officials in setting up of programs

#### 2. Conduct of Surveys

- Surveys of training and employment opportunities for psychologists
- Surveys of state facilities (e.g., schools and treatment centers) in terms of need for professional personnel generally and psychologists in particular
- Collaboration with other professions concerning qualifications for overlapping positions

#### 3. Contact with Legislators

- (in behalf of adequate compensation for scientific and professional personnel)

#### 4. Implementation of Legislation

- (concerning, e.g., the screening of exceptional children)

#### 5. Campaign for Graduate Program in State University

\* \* \*

**Advice to the Certification-Lorn.** A recent newsletter of the California State Psychological Association introduces a question-and-answer technique for clarifying features of its certification act. Following are some typical queries:

**Question:** I am a research psychologist in a large private corporation. Do I have to be certified?

**Answer:** Yes, unless you are supervised in your work as a psychologist by a Certified Psychologist.

**Question:** I never got a Master's degree, although I have completed all the work for a PhD except the dissertation. Can I qualify for "grandfather" certification?

**Answer:** Yes, if the Committee agrees that your work was the equivalent of a Master's degree. You must also have had five years of professional experience of a type considered qualifying by the committee.

**Question:** I got my degree in anthropology but am now working as a psychologist for the county. Can I qualify for "grandfather" certification?

**Answer:** If you are employed as a psychologist by a federal, state, county, or municipal civil service system, or if you have met the requirements, or passed examinations for the position of psychologist prior to July 1, 1959, you are eligible for a "grandfather" certificate.

**Legislation—Facts and Figures.** Under the heading "Some Random Facts," Frederick L. Marcuse, President of the Washington State Psychological Association, submits the following analysis.

Of the 86 psychologists responding to a questionnaire (out of a total of 99 certified during 1958), 13 had left or intended shortly to leave the state. Of the 73 remaining in the state (7 of whom are ABEPP diplomates), 43 engaged in private practice. Among the areas of specialization most frequently checked by the group of 73 were psychotherapy with adults and psychological testing of adults; least frequently checked were industrial counseling and speech disabilities. When given several alternatives by which to describe an area of their work, the respondents showed a clearcut preference for the terms "psychotherapy" and "psychological counseling" as compared with "clinical counseling" and "personality counseling."

\* \* \*

**State of the Union Message.** Chances are, some state association presidents silently fold their tents and quietly fade into retirement at the close of their terms. John M. McKee, Past President of the Alabama Psychological Association, suggests a swan song before the final curtain. In his "Report to the Membership," President McKee does some

conscientious soul searching about the year which has passed. He talks, among other things, about the influx of psychologists into the state, questions of legislation, relations with APA, the new PhD program at the state university. And under "Challenges, Opportunities, and Recommendations for 1959" he takes a look at such diverse problems as ethics and professional control, development of psychologists' research potentials, and matters of recruitment.

**Uncle Sam Wants You.** State associations recruit new members in several ways and with more or less vigor. Data from a recent questionnaire give some notion of the methods employed, the recruiting agent, and the candidate solicited.

Most frequently employed technique is the letter of invitation, accompanied by a membership application. Sometimes a copy of the newsletter is substituted for the letter, and sometimes the invitation is to attend a meeting of the association. At times solicitation of new members is direct, at other times through key people (e.g., university chairmen or chiefs of psychology programs).

The agent may, of course, be the individual member acting as a committee-of-one. More often, however, the membership committee takes on the function, while in other instances the job of recruitment is delegated to the association secretary.

The candidates sought are usually APA members who have not yet joined their state association. Sometimes they are sought out in particular locales (universities, clinical settings, industry), sometimes they come from the ranks of graduate students, and sometimes from the roster of certified psychologists.

**The Executive Secretary.** As with the weather, everyone talks about the state association executive secretary, but few do much about him. New Jersey does, and of him its By-Laws say:

The duties of the Executive Secretary shall be to serve as consultant to the President and the Executive Committee on appointments and actions, and to perform such duties as the President or Executive Committee delegate to him by virtue of his understanding of the continuing problems of the Association.

**Science Writer's Award.** The American Psychological Foundation last year bestowed an award on Ernest Haveman for his series of articles in *Life*. The Public Information Committee of the Missouri Psychological Association suggests to its membership that state associations may wish to

follow suit, giving an annual award to a science writer who has produced a superior account of psychology or psychological activities.

**Feature Billing.** The spring meeting of the North Dakota Psychological Association received newspaper coverage to the tune of a lengthy report complete with a picture of the association's officers. Among the program items were "Guidance and School Counseling," "Problems in Clinical and Experimental Psychology," and "Interprofessional Relations." Problems of legislation received special attention, and a program of nonstatutory certification was approved.

\* \* \*

**State Association Officers.** The following rosters of officers have been announced:

**Illinois Psychological Association**

President: George S. Speer  
President-elect: Ralph W. Heine  
Secretary: Alan K. Rosenwald  
Treasurer: Paul C. Greene

**Nebraska Psychological Association**

President: J. Lewis Yager  
President-elect: Katherine E. Baker  
Secretary-Treasurer: Frank J. Dudek

**North Dakota Psychological Association**

President: Conrad L. Kjerstad  
President-elect: Thomas O. Burgess  
Secretary: Mildred J. Treumann

**Puerto Rico Psychological Association**

President: Mercedes Rodrigo Bellido  
President-elect: Ramón Ramírez López  
Secretary: Jorge J. Dieppa  
Treasurer: Ada Elsa Izcoa

**South Carolina Psychological Association**

President: J. Roderick Hallum  
President-elect: Robert L. Brown  
Secretary-Treasurer: John E. Zuidema

**Utah Psychological Association**

President: William H. Brown  
President-elect: Oakley J. Gordon  
Executive Secretary: Irene H. Wiemers  
Treasurer: John O. Grimmert

**Board of Examiners.** In connection with its nonstatutory certification program, the North Dakota Psychological Association announces the following appointments to its Board of Examiners:

Chairman: Hermann F. Buegel  
Members: Ernest V. Estensen  
Murray R. Kovnar  
Paul F. Munger  
Grant M. Norem

—W. J. McKEACHIE  
E. L. HOCH

## Psychological Notes and News

Editors-elect appointed by the APA Council of Representatives are:

Edward S. Bordin *Journal of Consulting Psychology*

Harry Helson *Psychological Bulletin*

Richard L. Solomon *Psychological Review*

For issues of these journals appearing after 1 January 1959, manuscripts are to be sent to the Editors-elect.

The sentence: "A significant negative correlation between ISB and TAT scores was obtained." in the abstract by Phoebe L. Overstreet on page 350 of the July 1958 issue is amended to read: "A slight negative correlation . . ."

Robert J. Miner, of Goshen, New York, died July 24, 1958.

Louise E. Poull, of New York City, died July 28, 1958.

Earl A. Alluisi, formerly at the United States Army Medical Research Laboratory, and Robert C. Smader, formerly at the Georgia Division of Lockheed Aircraft Corporation, have joined the staff of the Missile Systems Division, Lockheed Aircraft Corporation, Sunnyvale, California.

The Claremont Graduate School and Pomona College have appointed George R. Bach to offer one course and one seminar in the clinical utilization of small group processes.

Libby Blek, formerly at the Jacksonville Child Guidance and Speech Correction Clinic, is now Chief Psychologist at the West Palm Beach Guidance Clinic.

Arthur H. Brayfield, formerly at Kansas State College, has been named Professor and Head of the Department of Psychology at Pennsylvania State University.

Jack Matthews, Head of the Speech Department at the University of Pittsburgh, has accepted appointment as Psychological Consultant to the Home For Crippled Children, Pittsburgh. Everett I. Campbell is Staff Psychologist at the home.

Israel W. Charny, formerly with the Rochester Board of Education, has accepted the position of Chief Psychologist at Oakbourne Hospital, West Chester, Pennsylvania.

Personnel additions to the Community Mental Health Program in Minnesota:

Robert Bloomberg has accepted the position of Chief Clinical Psychologist, Mower County Mental Health Center, Austin, Minnesota. He was formerly at St. Cloud VA Hospital.

Philip Vincent Mehmel has accepted the position of Chief Clinical Psychologist and Program Director, West Central Mental Health Center, Willmar, Minnesota. He was formerly at the Regina Mental Health Clinic.

Mitchell Wetherhorn has accepted the position of Chief Clinical Psychologist and Program Director, Northwestern Mental Health Center, Crookston, Minnesota. He was formerly at St. Peter State Hospital.

Junius A. Davis, formerly Director of Testing and Guidance for the Regents of the University System of Georgia, has become Professor of Psychology and Dean of the Graduate School at the Woman's College of the University of North Carolina.

Anthony Debons, Chief of the Human Engineering Laboratory at the Rome Air Development Center, has been appointed a member of the Panel on Biological and Medical Sciences, Committee on Polar Research, National Academy of Sciences.

Douglas S. Ellis, formerly at the Air Force Personnel and Training Research Center, has joined the staff of the Systems Development Laboratories, Hughes Aircraft Company, Culver City, California.

The Psychology Department of the Psychiatric Division of the Elmhurst General Hospital in Queens, New York, includes: Richard Madan, Staff Psychologist, formerly at the New York City Institute of Physical Medicine & Rehabilitation; Paul D. Park, Chief Psychologist; and Leonard Zuckman, Senior Psychologist.

Gail F. Farwell, formerly at Ohio State University, has accepted the position of Associate Professor of Education at the University of Wisconsin.



**Joshua A. Fishman**, formerly with the College Entrance Examination Board and at the City College of New York, has been appointed Director of Research in the Greenfield Center for Human Relations and Associate Professor of Human Relations and Psychology at the University of Pennsylvania.

**John R. Hills**, formerly at Educational Testing Service, has accepted the position of Director of Testing and Guidance for the Regents of the University System of Georgia.

**Libby G. Humphreys** was recently presented the Decoration for Exceptional Civilian Service, the highest Air Force honorary civilian award, in recognition of his outstanding contribution to personnel evaluation and selection research in the Air Force.

**Kay Inaba**, formerly with Martin-Denver, has joined the staff of Psychological Research Associates, Inc., Arlington, Virginia, as Research Scientist.

**LaVerne F. Irvine** has joined the staff of the Research, Training and Development Department at South Carolina State Hospital.

**Robert Jacobs**, formerly in Southeast Asia as an ICA educator, has been appointed Chief of the Far East & South Asia Branch of the Education Division, International Cooperation Administration in Washington, D. C.

**John L. Kennedy** has succeeded **E. G. Wever** as Chairman of the Department of Psychology at Princeton University.

**Alfred E. Kuenzli** has accepted a position as Associate Professor of Psychology and Education at Southern Illinois University (Alton campus).

The Psychological Corporation announces that **Albert K. Kurtz** has taken a one-year leave of absence from the University of Florida in order to direct a project on the training of radio code operators under a contract with the Office of Naval Research.

**David L. LaBerge**, formerly at Indiana University, has been appointed Associate Professor of Psychology at the University of Minnesota.

**C. H. Lawshe** has been named Dean of Technical Extension and Adult Education and Director of the Summer Session at Purdue University.

**M. Powell Lawton** has been appointed psychologist for the newly organized Pottstown Area Mental Health Clinic; he continues as an Assistant Director of the Psychology Department at Norristown State Hospital, Pennsylvania.

**Erwin Lesser**, formerly at the Easton Guidance Center, has accepted the position of Assistant Professor and Psychologist at the Guidance Center of the University of Miami.

**Moss L. Rawn** has been appointed Assistant Professor of Psychology at C. W. Post College in Long Island, New York. **Gustav Levine** replaces him as Chief, Clinical Psychology Department at Creedmoor Institute, New York.

**Arthur A. Lumsdaine**, formerly at the Air Force Personnel and Training Research Center, has been appointed Professor of Psychology at the Boston University Graduate School.

**Adolph Manoil**, Professor of Psychology at Park College, has been named Acting Dean.

**Sanford Brotman**, **Arthur J. Marion**, and **Franklin B. McClung**, all formerly at the San Fernando VA Hospital, have formed Marion, McClung, and Brotman, Consultants in Psychology in Encino, California.

**Norbett L. Mintz**, formerly at Brandeis University, has accepted an appointment at Harvard University as Instructor in Social Psychology and Research Associate in the Department of Social Relations.

**Edward J. Murray** has been appointed Assistant Professor of Psychology at Syracuse University, New York.

**John S. Pearson** has been appointed to the staff of the Mayo Clinic, Rochester, Minnesota, as a consulting clinical psychologist.

**Virginia M. Sherard**, formerly at George Washington University, has been named Dean of Women at Coe college.

**Arnold M. Small, Jr.**, formerly at Lehigh University, has been appointed Assistant Professor in the Department of Speech Pathology and Audiology and in the Department of Psychology at the State University of Iowa.

**Zanwil Sperber** has resigned from the University of California, Los Angeles, to accept an appointment as Coordinator, Cerebral Palsy Research Project, Research Department, Children's Hospital of Philadelphia.

**Julian C. Stanley**, Professor of Education at the University of Wisconsin, has been appointed a Fulbright Act research grantee in educational psychology for the coming academic year to work with Raymond Buyse in the Psycho-Pedagogical Laboratory at the Catholic University of Louvain, Belgium.

New staff appointments at the State College of Washington include **Clare Wright Thompson**, Professor and Director of Clinical Training; **Joseph Rychlak**, Assistant Professor; and **Jerome Brams**, Instructor.

The Norfolk State Hospital, Nebraska, announces the appointment of **Earl Seldon Taulbee** as Chief Clinical Psychologist, replacing **Walter G. Klopfer**.

In the Department of Psychology at the University of Pennsylvania:

**Robert R. Bush** has been appointed Professor of Psychology and Chairman of the Department.

**Julian Rotter** will be Visiting Professor of Psychology and **Robert C. Bolles** will be Visiting Assistant Professor of Psychology during the coming academic year.

**Eugene H. Galanter** and **Julius Wishner** will be on leave, the former to be at the Institute for Advanced Study in the Behavioral Sciences in Palo Alto and the latter as Visiting Scholar in the Psychological Clinic, Department of Social Relations, Harvard University.

**Robert A. Brotemarkle** and **Frank P. Bakes** will return from leaves of absence, the latter having spent the year as a Fulbright Fellow at the University of Oslo, Norway.

The following personnel changes have occurred in Psychology Services, Department of Medicine and Surgery, Veterans Administration:

**Wayne P. Anderson**, a graduate of the VA Psychology Training Program, University of Missouri, has been appointed to the Vocational Counseling Staff, VA Hospital, Jefferson Barracks, Missouri.

**Albert H. Bell**, a graduate of the VA Psychology Training Program, Louisiana State University, has been appointed to the Clinical Psychology Staff, VA Hospital, Augusta, Georgia.

**Alvin S. Bernstein**, a graduate of the VA Psychology Training Program, University of Buffalo, has been appointed to the Psychology Staff, VA Hospital, Montrose, New York.

**Murray Bilmes** has resigned from the position of Clinical Psychologist, VA Mental Hygiene Clinic, Brooklyn, New York.

**David S. Bingham** has transferred from the Chillicothe VA Hospital to the Psychology Staff, VA Hospital, Northampton, Massachusetts.

**Paula M. Brown** has transferred from the Albany VA Hospital to the Clinical Psychology Staff, VA Hospital, Tuskegee, Alabama.

**Paul Daston** has transferred from the Brockton VA Hospital to the position of Chief Clinical Psychologist, VA Hospital, Durham, North Carolina.

**Beverly Davenport** has transferred from the American Lake VA Hospital to the Clinical Psychology Staff, VA Mental Hygiene Clinic, San Diego, California.

**Philip DiGiovanni**, a graduate of the VA Psychology Training Program, University of Illinois, has been appointed to the Psychology Staff, VA Hospital, Danville, Illinois.

**Norman L. Farberow** has transferred from the Los Angeles VA Mental Hygiene Clinic to the VA Center, Los Angeles, California.

**Dana Hanford**, a graduate of the VA Psychology Training Program, University of Kansas, has been appointed to the Clinical Psychology Staff, VA Hospital, Topeka, Kansas.

**Frederick H. Heilizer** has transferred from the Canandaigua VA Hospital to the Psychology Staff, VA Hospital, Northampton, Massachusetts.

**Philip C. Henderson** has transferred from the North Little Rock VA Hospital to the Clinical Psychology Staff, VA Hospital, Augusta, Georgia.

**Aaron Hershkowitz** has been appointed to the Psychology Staff, VA Hospital, West Haven, Connecticut.

**Wilson L. Hunt** has resigned from the position of Clinical Psychologist, VA Hospital, Canandaigua, New York.

**Robert C. Kammerer** has been appointed to the Psychology Staff, VA Hospital, Memphis, Tennessee.

**William H. Knapp** has resigned from the Columbus VA Area Medical Office to accept a position at Wayne University.

**Solomon Levine** has resigned from the position of Psychologist, VA Hospital, Brooklyn, New York.

**Max G. Magnussen**, a graduate of the VA Psychology Training Program, University of Kentucky, has been appointed to the Psychology Staff, VA Hospital, Cincinnati, Ohio.

**Melvin Manis** has been appointed to the Psychology Staff, VA Hospital, Ann Arbor, Michigan.

**Laurence D. Mathae** has resigned from the position of Clinical Psychologist, VA Hospital, Sepulveda, California.

**Paul L. Metzger**, a graduate of the VA Psychology Training Program, University of Oregon, has been appointed to the Vocational Counseling Staff, VA Hospital, Roseburg, Oregon.

**Walter E. O'Connell**, a graduate of the VA Psychology Training Program, University of Texas, has been appointed to the Psychology Staff, VA Center, Waco, Texas.

**Donald M. Paull**, a graduate of the VA Psychology Training Program, Northwestern University, has been appointed to the Psychology Staff, VA Hospital (West Side), Chicago, Illinois.

**Kenneth Purcell** has been appointed to the Clinical Psychology Staff, VA Mental Hygiene Clinic, Denver, Colorado.

**Norman Reichenberg** has resigned from the Augusta VA Hospital to accept a position at Jackson Memorial Hospital, Miami, Florida.

**Mary D. Rootes**, a postdoctoral graduate of the VA Psychology Training Program, Northwestern University, has been appointed to the Psychology Staff, VA Hospital, Hines, Illinois.

**James S. Simpkin** has resigned from the position of Chief Clinical Psychologist, VA Mental Hygiene Clinic, Newark, New Jersey.

**Paschal N. Strong** has resigned from the Durham VA Hospital to accept a position at Bowman Gray Medical School, Winston-Salem, North Carolina.

**Russell F. Tomlinson**, a graduate of the VA Psychology Training Program, University of Florida, has been appointed to the Psychology Staff, VA Hospital, Durham, North Carolina. It was erroneously reported previously that he had been appointed to the VA Center, Biloxi, Mississippi.

**Herbert Turkel** has resigned from the position of Psychologist, VA Hospital, Montrose, New York.

**Martin Wagner** has resigned from the position of Psychologist, VA Mental Hygiene Clinic, New York.

**Bertram A. Weiss** has been appointed Acting Chief, Psychology Service, VA Hospital, Alexandria, Louisiana.

**Ronald M. Wilcox** has been appointed to the Psychology Staff, VA Mental Hygiene Clinic, Los Angeles, California.

**Wayne Wisham** has transferred from the Lincoln VA Hospital to the position of Chief Clinical Psychologist, VA Hospital, Fresno, California.

**George H. Weber** has been appointed Consultant on Diagnostic and Clinical Treatment Services in Institutions Serving Delinquent Children, Division of Juvenile Delinquency Service, Children's Bureau, Department of Health, Education, and Welfare.

The newly appointed Chief of the Clinical Psychology Service at Walter Reed Army Hospital is **Wendell R. Wilkin**.

The Educational Testing Service is offering for 1959-1960 its twelfth series of research fellowships in psychometrics leading to the PhD degree at Princeton University. Open to men who are acceptable to the Graduate School of the university, the two fellowships each carry a stipend of \$2,650 a year and are normally renewable. Fellows will be engaged in part-time research in the general area of psychological measurement at the offices of the Educational Testing Service and will, in addition, carry a normal program of studies in the Graduate

School. The closing date for completing applications is January 2, 1959. Information and application blanks may be obtained from: Director of Psychometric Fellowship Program, Educational Testing Service; 20 Nassau Street; Princeton, New Jersey.

The Ford Foundation, through its Program in Economic Development and Administration, will make a limited number of postdoctoral fellowship grants to persons teaching in anthropology, psychology, sociology, and political science, for study and research on problems related to business firms. Grants will be for periods of up to one calendar year. Fellowship holders will be expected to spend at least part of the grant period at a university with a graduate program in business administration or management. Applications must be received not later than November 1, 1958; announcements will be made in January 1959 for the 1959-1960 academic year. Information and applications may be obtained by writing to: Director, Program in Economic Development & Administration, Ford Foundation; 477 Madison Avenue; New York 22, New York.

The Foundations' Fund for Research in Psychiatry announces that October 15, 1958 is the next deadline for the submission of completed applications for *research fellowships* in psychiatry, psychology, sociology, neurophysiology, and other sciences relevant to mental health. The deadline following this will be January 15, 1959. The next deadline for receipt of applications for *research grants-in-aid* is December 10, 1958. Interested persons are invited to write for details to: Foundations' Fund for Research in Psychiatry; 251 Edwards Street; New Haven 11, Connecticut.

The James McKeen Cattell Fund invites requests for grants-in-aid in the field of applied psychology. Applications should be filed by January 15, 1959. They will be considered at the Annual Meeting of the Trustees of the fund in February. Procedural and other relevant information may be obtained by writing to: Elsie O. Bregman, Secretary-Treasurer; 425 Riverside Drive—11C; New York 25, New York.

Opportunity Fellowships are open to citizens who have given evidence of special ability and who have not had full opportunity to develop their talents

because of arbitrary barriers. The fellowships are open not only for academic study (graduate) but for other types of training or experience which may be most useful in developing varied talents and varied forms of leadership. Complete applications must be filed not later than November 30, 1958. Address inquiries to: Opportunity Fellowships; John Hay Whitney Foundation; 630 Fifth Avenue; New York 20, New York.

Irving Taylor, Professor of Psychology at Pratt Institute, has been given a grant by Perceptual Development Laboratories to design a film on the psychology of creativity called, "The Nature of Creative Process." The film will be for the Percepto-Scope, a projector which permits a combination of stills, animation, and live action material in the same film.

Gilbert M. Trachtman has been appointed Research Coordinator for the Long Beach phase of a New York University-Long Beach-Ossining Cooperative Study sponsored by the Ford Foundation. The study is to evaluate hypotheses concerning a Dual Progress Plan for elementary education and involves the establishment of an Experimental Teaching Center at New York University.

Under a grant from the Office of Naval Research, Warren G. Bennis, Assistant Professor of Psychology and Senior Research Associate at the Boston University Human Relations Center, will study the effects of organizational patterns on such factors as morale and productivity and what happens when the organizational patterns are changed.

The Psychology Department at Pomona College and the Institute of Group Psychotherapy are co-operatively engaged in a research project dealing with measuring and conceptualizing the longitudinal development of interpersonal perceptions. George Bach is the principle co-investigator.

Thomas W. Harrell has been awarded a Ford Foundation Research Fellowship in Business and Economics to study management selection. He will be on leave from the Graduate School of Business at Stanford University.

Construction is in progress at the Nebraska Psychiatric Institute of the University of Nebraska

College of Medicine on a neuropsychiatric research pavilion and a special facility for **mentally retarded children** made possible by gifts and grants from the Carl and Caroline Swanson Foundation, an anonymous donor, the University of Nebraska and the State Board of Control, the National Institutes of Health, and from the Hill-Burton funds.

George Bach gave seminars and demonstration-lectures in 13 European university or clinic centers on the subject of **group psychotherapy**.

Norman C. Meier recently presented lectures at Cambridge University and at the University of London on the subject of "Recent Research in Creative Thinking, with Particular Reference to Art."

Harold Michal-Smith, Director of the Division of Psychology, New York Medical College, and Morris Morgenstern, Chief Psychologist, United Cerebral Palsy Association, Nassau County, conducted lectures and seminars at Hebrew University in Jerusalem on the problems of **mental retardation, cerebral palsy, and brain injury** in children.

The Association for Psychiatric Treatment of Offenders (9 East 97th Street; New York 29, New York) has recently sponsored workshops on "Special Difficulties with Offenders," "Goals of Therapy for Juvenile Delinquents," "Psychiatry and Crime," "Juvenile Murderers," and "When is Punishment Effective?"

The ninth Annual Conference of Administrators of College and University Counseling Services will be held on October 27-29, 1958, in Minneapolis. The theme of the conference will be "A Reappraisal of Vocational Counseling in Higher Education." Further information can be obtained from: Ralph Berdie; 101 Eddie Hall, University of Minnesota; Minneapolis, Minnesota.

The twenty-third Educational Conference will be held on October 30-31, 1958 in New York City under the sponsorship of the Educational Records Bureau and the American Council on Education. The theme will be "The Positive Values in the American Educational System." For further information, write to: Arthur E. Traxler; Educational Records Bureau; 21 Audubon Avenue; New York 32, New York.

The eleventh Annual Conference on Electrical Techniques in Medicine and Biology will be



held in Minneapolis, Minnesota, on November 19-21, 1958. For further information, write to: Robert Erskine; Minneapolis Honeywell; 2753 Fourth Avenue South; Minneapolis, Minnesota.

The ninth Annual Conference of the **National Association of Music Therapy** will be held October 30-November 1, 1958 in Cincinnati, Ohio.

An **Institute on Chronic Schizophrenia and Hospital Treatment Programs** will be held on October 1-3, 1958. The purpose of the meeting is to define specific practical treatments of chronic schizophrenia for mental hospitals; to promote new ideas and research activity; and to debate, discuss, and clarify divergent points of view on schizophrenia. For further information, write to: Osawatomie State Hospital; Osawatomie, Kansas.

The **American Psychosomatic Society** will hold its sixteenth Annual Meeting in Atlantic City on May 2-3, 1959. Abstracts, in octuplicate, should be submitted, for the Program Committee's consideration, to: Milton Rosenbaum; 265 Nassau Road; Roosevelt, New York.

The Annual Meeting of the New York Chapter of the **American Society of Group Psychotherapy and Psychodrama** will be held on November 21-23, 1958 in New York City. Address all papers or communications to: Martin R. Haskell; 455 West 34th Street; New York 1, New York.

The **Society for Clinical and Experimental Hypnosis** will hold its Annual Meeting on October 29-31, 1958 in Chicago. For further information, write to: Administrative Secretary, Society for Clinical and Experimental Hypnosis; 750 North Michigan Avenue; Chicago 11, Illinois.

The **Audiology Study Group of New York** in cooperation with the New York State Association for Crippled Children, Inc. and the New York University-Bellevue Medical Center will sponsor a one-day tutorial session on the theme of "**Perception.**" The session will be held November 20, 1958 at the New York University Postgraduate Medical School. For further information, write to: Maurice H. Miller; Division of Otolaryngology, State University of New York Downstate Medical Center; 450 Clarkson Avenue; Brooklyn 3, New York.

The **Human Factors Society of America, Inc.**, a new group concerned with "man-machine problems" has elected its first slate of officers: Renato Contini, President; Arnold Small, President-elect; John Lyman, Vice-President; Paul Cheatham, Secretary; and Donald W. Conover, Treasurer. Members of the Executive Council are Max Lund, Ross McFarland, Paul Fitts, Jack Kraft, Hans Hertzberg, and Clifford Seitz. Chosen as Editor-in-Chief of the society's journal was Stanley Lippert. Membership inquiries may be directed to: Human Factors Society of America; P. O. Box 24032; Los Angeles 24, California.

At a recent meeting of the Philadelphia Division of the **Society for Projective Techniques**, Zygmont A. Piotrowski was elected President and Stanton B. Felzer, Secretary-Treasurer. The first meeting of the 1958-1959 season will be held in October.

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## Convention Calendar

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**American Psychological Association:** September 4-10, 1959; Cincinnati, Ohio

*For information, write to:*

Roderick H. Bare  
American Psychological Association  
1333 Sixteenth Street, N.W.  
Washington 6, D. C.

**Southern Society for Philosophy and Psychology:**  
March 27-28, 1959; St. Louis, Missouri

*For information, write to:*

Wilse B. Webb  
Department of Psychology  
University of Florida  
Gainesville, Florida

**Eastern Psychological Association:** April 3-4, 1959;  
Atlantic City, New Jersey

*For information, write to:*

Carl H. Rush  
P. O. Box 252  
Glenbrook, Connecticut

**Southwestern Psychological Association:** April 16-18, 1959; Topeka, Kansas

*For information, write to:*

Beatrix Cobb  
Texas Technological College  
Lubbock, Texas

**Western Psychological Association:** April 16-18, 1959;  
San Diego, California

*For information, write to:*

Ivan N. McCollom  
San Diego State College  
San Diego 15, California

**Southeastern Psychological Association:** April 23-25, 1959; St. Augustine, Florida

*For information, write to:*

Susan W. Gray  
Box 232  
George Peabody College  
Nashville 12, Tennessee

**Midwestern Psychological Association:** May 7-9, 1959;  
Chicago, Illinois

*For information, write to:*

I. E. Farber, Secretary-Treasurer  
Midwestern Psychological Association  
Department of Psychology  
State University of Iowa  
Iowa City, Iowa

**National Society for Crippled Children and Adults:**  
November 16-19, 1958; Dallas, Texas

*For information, write to:*

National Society for Crippled Children and Adults  
11 South LaSalle Street  
Chicago 3, Illinois

**American Association for the Advancement of Science:** December 26-31, 1958; Washington, D. C.

*For information, write to:*

Raymond L. Taylor  
American Association for the Advancement of Science  
1515 Massachusetts Avenue, N.W.  
Washington 5, D. C.

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